

Prashant Pardeshi, Taro Kageyama (Eds.)  
**Handbook of Japanese Contrastive Linguistics**

# **Handbooks of Japanese Language and Linguistics**

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Edited by  
Masayoshi Shibatani  
Taro Kageyama

## **Volume 6**

# Handbook of Japanese Contrastive Linguistics

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# Preface

The project of compiling a series of comprehensive handbooks covering major fields of Japanese linguistics started in 2011, when Masayoshi Shibatani received a commission to edit such volumes as series editor from De Gruyter Mouton. As the planning progressed, with the volume titles selected and the volume editors assigned, the enormity of the task demanded the addition of a series co-editor. Taro Kageyama, Director-General of the National Institute for Japanese Language and Linguistics (NINJAL), was invited to join the project as a series co-editor. His participation in the project opened the way to make it a joint venture between NINJAL and De Gruyter Mouton. We are pleased to present the *Handbooks of Japanese Language and Linguistics (HJLL)* as the first materialization of the agreement of academic cooperation concluded between NINJAL and De Gruyter Mouton.

The HJLL Series is composed of twelve volumes, primarily focusing on Japanese but including volumes on the Ryukyuan and Ainu languages, which are also spoken in Japan, as well as some chapters on Japanese Sign Language in the applied linguistics volume.

- Volume 1: *Handbook of Japanese Historical Linguistics*
- Volume 2: *Handbook of Japanese Phonetics and Phonology*
- Volume 3: *Handbook of Japanese Lexicon and Word Formation*
- Volume 4: *Handbook of Japanese Syntax*
- Volume 5: *Handbook of Japanese Semantics and Pragmatics*
- Volume 6: *Handbook of Japanese Contrastive Linguistics*
- Volume 7: *Handbook of Japanese Dialects*
- Volume 8: *Handbook of Japanese Sociolinguistics*
- Volume 9: *Handbook of Japanese Psycholinguistics*
- Volume 10: *Handbook of Japanese Applied Linguistics*
- Volume 11: *Handbook of the Ryukyuan Languages*
- Volume 12: *Handbook of the Ainu Language*

Surpassing all currently available reference works on Japanese in both scope and depth, the *HJLL* series provides a comprehensive survey of nearly the entire field of Japanese linguistics. Each volume includes a balanced selection of articles contributed by established linguists from Japan as well as from outside Japan and is critically edited by volume editors who are leading researchers in their individual fields. Each article reviews milestone achievements in the field, provides an overview of the state of the art, and points to future directions of research. The twelve titles are thus expected individually and collectively to contribute not only to the enhancement of studies on Japanese on the global level but also to the opening up of new perspectives for general linguistic research from both empirical and theoretical standpoints.

The *HJLL* project has been made possible by the active and substantial participation of numerous people including the volume editors and authors of individual

chapters. We would like to acknowledge with gratitude the generous support, both financial and logistic, given to this project by NINJAL. We are also grateful to John Haig (retired professor of Japanese linguistics, the University of Hawai'i at Mānoa), serving as copy-editor for the series. In the future, more publications are expected to ensue from the NINJAL-Mouton academic cooperation.

Masayoshi Shibatani, Deedee McMurtry Professor of Humanities and Professor of Linguistics, Rice University/Professor Emeritus, Kobe University

Taro Kageyama, Director-General, National Institute for Japanese Language and Linguistics (NINJAL)/Professor Emeritus, Kwansei Gakuin University

Masayoshi Shibatani and Taro Kageyama

# **Introduction to the *Handbooks of Japanese Language and Linguistics***

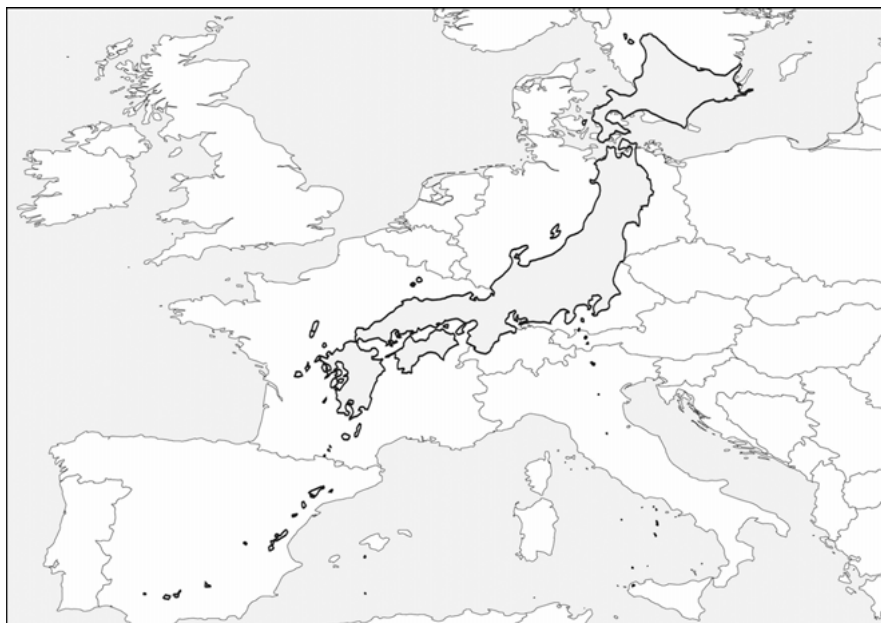
Comprising twelve substantial volumes, the *Handbooks of Japanese Language and Linguistics* (HJLL) series provides a comprehensive survey of practically all the major research areas of Japanese linguistics on an unprecedented scale, together with surveys of the endangered languages spoken in Japan, Ryukyuan and Ainu. What follows are introductions to the individual handbooks, to the general conventions adopted in this series, and the minimum essentials of contemporary Standard Japanese. Fuller descriptions of the languages of Japan, Japanese grammar, and the history of the Japanese language are available in such general references as Martin (1975), Shibatani (1990), and Frellesvig (2010).

## **1 Geography, Population, and Languages of Japan**

Japan is situated in the most populous region of the world – Asia, where roughly one half of the world population of seven billion speak a variety of languages, many of which occupy the top tier of the ranking of the native-speaker population numbers. Japanese is spoken by more than 128 million people (as of 2013), who live mostly in Japan but also in Japanese emigrant communities around the world, most notably Hawaii, Brazil and Peru. In terms of the number of native speakers, Japanese ranks ninth among the world's languages. Due partly to its rich and long literary history, Japanese is one of the most intensely studied languages in the world and has received scrutiny under both the domestic grammatical tradition and those developed outside Japan such as the Chinese philological tradition, European structural linguistics, and generative grammar developed in America. The *Handbooks of Japanese Language and Linguistics* intend to capture the achievements garnered over the years through analyses of a wide variety of phenomena in a variety of theoretical frameworks.

As seen in Map 1, where Japan is shown graphically superimposed on Continental Europe, the Japanese archipelago has a vast latitudinal extension of approximately 3,000 kilometers ranging from the northernmost island, roughly corresponding to Stockholm, Sweden, to the southernmost island, roughly corresponding to Sevilla, Spain.

Contrary to popular assumption, Japanese is not the only language native to Japan. The northernmost and southernmost areas of the Japanese archipelago are inhabited by people whose native languages are arguably distinct from Japanese. The southernmost sea area in Okinawa Prefecture is dotted with numerous small islands



**Map 1:** *Japan as overlaid on Europe*

Source: Shinji Sanada. 2007. *Hōgen wa kimochi o tsutaeru [Dialects convey your heart]*.

Tokyo: Iwanami, p. 68.

where Ryukyuan languages are spoken. Until recent years, Japanese scholars tended to treat Ryukyuan language groups as dialects of Japanese based on fairly transparent correspondences in sounds and grammatical categories between mainland Japanese and Ryukyuan, although the two languages are mutually unintelligible. Another reason that Ryukyuan languages have been treated as Japanese dialects is that Ryukyuan islands and Japan form a single nation. In terms of nationhood, however, Ryukyu was an independent kingdom until the beginning of the seventeenth century, when it was forcibly annexed to the feudal domain of Satsuma in southern Kyushu.

A more recent trend is to treat Ryukyuan as forming a branch of its own with the status of a sister language to Japanese, following the earlier proposals by Chamberlain (1895) and Miller (1971). Many scholars specializing in Ryukyuan today even confer language status to different language groups within Ryukyuan, such as Amami language, Okinawan language, Miyako language, etc., which are grammatically distinct to the extent of making them mutually unintelligible. The prevailing view now has Japanese and Ryukyuan forming the Japonic family as daughter languages of Proto-Japonic. HJLL follows this recent trend of recognizing Ryukyuan as a sister language to Japanese and devotes one full volume to it. The *Handbook of the Ryukyuan Languages* provides the most up-to-date answers pertaining to Ryukyuan



language structures and use, and the ways in which these languages relate to Ryukyuan society and history. Like all the other handbooks in the series, each chapter delineates the boundaries and the research history of the field it addresses, comprises the most important and representative information on the state of research, and spells out future research desiderata. This volume also includes a comprehensive bibliography of Ryukyuan linguistics.

The situation with Ainu, another language indigenous to Japan, is much less clear as far as its genealogy goes. Various suggestions have been made relating Ainu to Paleo-Asiatic, Ural-Altaic, and Malayo-Polynesian or to such individual languages as Gilyak and Eskimo, besides the obvious candidate of Japanese as its sister language. The general consensus, however, points to the view that Ainu is related to Japanese quite indirectly, if at all, via the Altaic family with its Japanese-Korean subbranch (see Miller 1971; Shibatani 1990: 5–7 for an overview). Because Ainu has had northern Japan as its homeland and because HJLL is also concerned with various aspects of Japanese linguistics scholarship in general, we have decided to include a volume devoted to Ainu in this series. The *Handbook of the Ainu Language* outlines the history and current state of the Ainu language, offers a comprehensive survey of Ainu linguistics, describes major Ainu dialects in Hokkaido and Sakhalin, and devotes a full section to studies dealing with typological characteristics of the Ainu language such as polysynthesis and incorporation, person marking, plural verb forms, and aspect and evidentials.

## 2 History

Japan's rich and long literary history dates back to the seventh century, when the Japanese learned to use Chinese characters in writing Japanese. Because of the availability of abundant philological materials, the history of the Japanese language has been one of the most intensely pursued fields in Japanese linguistics. While several different divisions of Japanese language history have been proposed, Frellesvig (2010) proposes the following four linguistic periods, each embracing the main political epochs in Japanese history.

- |                          |           |  |
|--------------------------|-----------|--|
| 1. Old Japanese          | 700–800   | (Nara period, 712–794)   |
| 2. Early Middle Japanese | 800–1200  | (Heian period, 794–1185)   |
| 3. Late Middle Japanese  | 1200–1600 | (Kamakura period, 1185–1333;<br>Muromachi period, 1333–1573)                                 |
| 4. Modern Japanese       | 1600–     | (Edo, 1603–1868; Meiji, 1868–1912;<br>Taishō, 1912–1926; Shōwa, 1926–1989;<br>Heisei, 1989–) |

This division reflects a major gulf between Pre-modern and Modern Japanese caused by some radical changes in linguistic structure during the Late Middle Japanese period. Modern Japanese is often further subdivided into Early Modern (Edo, 1603–1868), Modern (Meiji, 1868–1912; Taishō, 1912–1926), and Present-day Japanese (Shōwa, 1926–1989; Heisei, 1989–).

The *Handbook of Japanese Historical Linguistics* will present the latest research on better studied topics, such as segmental phonology, accent, morphology, and some salient syntactic phenomena such as focus constructions. It will also introduce areas of study that have traditionally been underrepresented, ranging from syntax and Sinico-Japanese (*kanbun*) materials to historical pragmatics, and demonstrate how they contribute to a fuller understanding of the overall history of Japanese, as well as outlining larger-scale tendencies and directions in changes that have taken place within the language over its attested history. Major issues in the reconstruction of prehistoric Japanese and in the individual historical periods from Old Japanese to Modern Japanese are discussed including writing and the materials for historical studies, influences of Sinico-Japanese on Japanese, the histories of different vocabulary strata, the history of honorifics and polite language, generative diachronic syntax, and the development of case marking.

### 3 Geographic and Social Variations

Because of the wide geographical spread of the Japanese archipelago from north to south, characterized by high mountain ranges, deep valleys, and wide rivers as well as numerous islands, Japanese has developed a multitude of dialects, many of which differ from each other in a way more or less like current descendants of the Romance language family. Like the historical studies, the research tradition of dialect studies has a unique place in Japanese linguistics, which has also attracted a large number of students, amateur collectors of dialect forms as well as professional linguists. The *Handbook of Japanese Dialects* surveys the historical backdrop of the theoretical frameworks of contemporary studies in Japanese geolinguistics and includes analyses of prominent research topics in cross-dialectal perspectives, such as accentual systems, honorifics, verbs of giving, and nominalizations. The volume also devotes large space to sketch grammars of dialects from the northern island of Hokkaido to the southern island of Kyushu, allowing a panoramic view of the differences and similarities in the representative dialects throughout Japan.

Besides the physical setting fostering geographic variations, Japanese society has experienced several types of social structure over the years, starting from the time of the nobility and court life of the Old and Early Middle Japanese periods, through the caste structure of the feudalistic Late Middle and Early Modern Japanese periods, to the modern democratic society in the Modern and Present-day Japanese

periods. These different social structures spawned a variety of social dialects including power- and gender-based varieties of Japanese. The ***Handbook of Japanese Sociolinguistics*** examines a wide array of sociolinguistic topics ranging from the history of Japanese sociolinguistics, including foreign influences and internal innovations, to the central topics of variations due to social stratification, gender differences, and discourse genre. Specific topics include honorifics and women's speech, critical discourse analysis, pragmatics of political discourse, contact-induced change, emerging new dialects, Japanese language varieties outside Japan, and language policy.

## 4 Lexicon and Phonology

The literary history of Japan began with early contacts with China. Chinese apparently began to enrich the Japanese lexicon in even pre-historic periods, when such deeply assimilated words as *uma* 'horse' and *ume* 'plum' are believed to have entered the language. Starting in the middle of the sixth century, when Buddhism reached Japan, Chinese, at different periods and from different dialect regions, has continuously contributed to Japanese in an immeasurable way affecting all aspects of grammar, but most notably the lexicon and the phonological structure, which have sustained further and continuous influences from European languages from the late Edo period on. Through these foreign contacts, Japanese has developed a complex vocabulary system that is composed of four lexical strata, each with unique lexical, phonological, and grammatical properties: native Japanese, mimetic, Sino-Japanese, and foreign (especially English).

The ***Handbook of Japanese Lexicon and Word Formation*** presents a comprehensive survey of the Japanese lexicon, word formation processes, and other lexical matters seen in the four lexical strata of contemporary Japanese. The agglutinative character of the language, coupled with the intricate system of vocabulary strata, makes it possible for compounding, derivation, conversion, and inflection to be closely intertwined with syntactic structure, giving rise to theoretically intriguing interactions of word formation processes and syntax that are not easily found in inflectional, isolating, or polysynthetic types of languages. The theoretically oriented studies associated with these topics are complemented by those oriented toward lexical semantics, which also bring to light theoretically challenging issues involving the morphology-syntax interface.

The four lexical strata characterizing the Japanese lexicon are also relevant to Japanese phonology as each stratum has some characteristic sounds and sound combinations not seen in the other strata. The ***Handbook of Japanese Phonetics and Phonology*** describes and analyzes the basic phonetic and phonological structures of modern Japanese with main focus on standard Tokyo Japanese, relegating the topics of dialect phonetics and phonology to the *Handbook of Japanese Dialects*.

The handbook includes several chapters dealing with phonological processes unique to the Sino-Japanese and foreign strata as well as to the mimetic stratum. Other topics include word tone/accent, mora-timing, sequential voicing (*rendaku*), consonant geminates, vowel devoicing and diphthongs, and the appearance of new consonant phonemes. Also discussed are phonetic and phonological processes within and beyond the word such as rhythm, intonation, and the syntax-phonology interface, as well as issues bearing on other subfields of linguistics such as historical and corpus linguistics, L1 phonology, and L2 research.

## 5 Syntax and Semantics

Chinese loans have also affected Japanese syntax, though the extent is unclear to which they affected Japanese semantics beyond the level of lexical semantics. In particular, Chinese loans form two distinct lexical categories in Japanese – verbal nouns, forming a subcategory of the noun class, and adjectival nouns (*keiyō dōshi*), which are treated as forming major lexical categories, along with noun, verb, and adjective classes, by those who recognize this as an independent category. The former denote verbal actions, and, unlike regular nouns denoting objects and thing-like entities, they can function as verbs by combining with the light verb *suru* ‘do’. The nominal-verbal Janus character of verbal nouns results in two widely observed syntactic patterns that are virtually synonymous in meaning; e.g., *benkyōo-suru* (studying-DO) ‘to study’ and *benkyōo o suru* (studying ACC do) ‘do studying’. As described in the *Handbook of Japanese Lexicon and Word Formation*, the lexical category of adjectival noun has been a perennial problem in the analysis of Japanese parts of speech. The property-concept words, e.g., *kirei* ‘pretty’, *kenkōo* ‘health/healthy’, falling in this class do not inflect by themselves unlike native Japanese adjectives and, like nouns, require the inflecting copula *da* in the predication function – hence the label of adjectival noun for this class. However, many of them cannot head noun phrases – the hallmark of the nominal class – and some of them even yield nouns via *-sa* nominalization, which is not possible with regular nouns.

The Lexicon-Word Formation handbook and the *Handbook of Japanese Syntax* make up twin volumes because many chapters in the former deal with syntactic phenomena, as the brief discussion above on the two Sino-Japanese lexical categories clearly indicates. The syntax handbook covers a vast landscape of Japanese syntax from three theoretical perspectives: (1) traditional Japanese grammar, known as *kokugogaku* (lit. national-language study), (2) the functional approach, and (3) the generative grammar framework. Broad issues analyzed include sentence types and their interactions with grammatical verbal categories, grammatical relations (topic, subject, etc.), transitivity, nominalization, grammaticalization, voice (passives and

causatives), word order (subject, scrambling, numeral quantifier, configurationality), case marking (*ga/no* conversion, morphology and syntax), modification (adjectives, relative clause), and structure and interpretation (modality, negation, prosody, ellipsis). These topics have been pursued vigorously over many years under different theoretical persuasions and have had important roles in the development of general linguistic theory. For example, the long sustained studies on the grammatical of subject and topic in Japanese have had significant impacts on the study of grammatical relations in European as well as Austronesian languages. In the study of word order, the analysis of Japanese numeral quantifiers is used as one of the leading pieces of evidence for the existence of a movement rule in human language. Under case marking, the way subjects are case-marked in Japanese has played a central role in the study of case marking in the Altaic language family. Recent studies of nominalizations have been central to the analysis of their modification and referential functions in a wide variety of languages from around the globe with far-reaching implications to past studies of such phenomena as parts of speech, (numeral) classifiers, and relative clauses. And the study of how in Japanese prosody plays a crucial role in interpretation has become the basis of some important recent developments in the study of *wh*-questions.

The *Handbook of Japanese Semantics and Pragmatics* presents a collection of studies on linguistic meaning in Japanese, either as conventionally encoded in linguistic form (the field of semantics) or as generated by the interaction of form with context (the field of pragmatics). The studies are organized around a model that has long currency in traditional Japanese grammar, whereby the linguistic clause consists of a multiply nested structure centered in a propositional core of objective meaning around which forms are deployed that express progressively more subjective meaning as one moves away from the core toward the periphery of the clause. Following this model, the topics treated in this volume range from aspects of meaning associated with the propositional core, including elements of meaning structured in lexical units (lexical semantics), all the way to aspects of meaning that are highly subjective, being most grounded in the context of the speaker. In between these two poles of the semantics-pragmatics continuum are elements of meaning that are defined at the level of propositions as a whole or between different propositions (propositional logic) and forms that situate propositions in time as events and those situating events in reality including non-actual worlds, e.g., those hoped for (desiderative meaning), denied (negation), hypothesized (conditional meaning), or viewed as ethically or epistemologically possible or necessary (epistemic and deontic modality). Located yet closer to the periphery of the Japanese clause are a rich array of devices for marking propositions according to the degree to which the speaker is committed to their veracity, including means that mark differing perceptual and cognitive modalities and those for distinguishing information variously presupposed.

These studies in Japanese syntax and semantics are augmented by cross-linguistic studies that examine various topics in these fields from the perspectives of language

universals and the comparative study of Japanese and another language. The ***Handbook of Japanese Contrastive Linguistics*** sets as its primary goal uncovering principled similarities and differences between Japanese and other languages around the globe and thereby shedding new light on the universal and language-particular properties of Japanese. Topics ranging from inalienable possession to numeral classifiers, from spatial deixis to motion typology, and from nominalization to subordination, as well as topics closely related to these phenomena are studied in the typological universals framework. Then various aspects of Japanese such as resultative-progressive polysemy, entailment of event realization, internal-state predicates, topic constructions, and interrogative pronouns, are compared and contrasted with individual languages including Ainu, Koryak, Chinese, Korean, Newar, Thai, Burmese, Tagalog, Kapampangan, Lamaholot, Romanian, French, Spanish, German, English, Swahili, Sidaama, and Mayan languages.

## 6 Psycholinguistics and Applied Linguistics

HJLL includes two volumes containing topics related to wider application of Japanese linguistics and to those endeavors seeking grammar-external evidence for the psychoneurological reality of the structure and organization of grammar. By incorporating the recent progress in the study of the cognitive processes and brain mechanisms underlying language use, language acquisition, and language disorder, the ***Handbook of Japanese Psycholinguistics*** discusses the mechanisms of language acquisition and language processing. In particular, the volume seeks answers to the question of how Japanese is learned/acquired as a first or second language, and pursues the question of how we comprehend and produce Japanese sentences. The chapters in the acquisition section allow readers to acquaint themselves with issues pertaining to the question of how grammatical features (including pragmatic and discourse features) are acquired and how our brain develops in the language domain, with respect to both language-particular and universal features. Specific topics dealt with include Japanese children's perceptual development, the conceptual and grammatical development of nouns, Japanese specific language impairment, narrative development in the L1 cognitive system, L2 Japanese acquisition and its relation to L1 acquisition. The language processing section focuses on both L1 and L2 Japanese processing and covers topics such as the role of prosodic information in production/comprehension, the processing of complex grammatical structures such as relative clauses, the processing issues related to variable word order, and lexical and sentence processing in L2 by speakers of a different native language.

The ***Handbook of Japanese Applied Linguistics*** complements the Psycholinguistics volume by examining language acquisition from broader sociocultural per-

spectives, i.e., language as a means of communication and social behavioral system, emphasizing pragmatic development as central to both L1 and L2 acquisition and overall language/human development. Topics approached from these perspectives include the role of caregiver's speech in early language development, literacy acquisition, and acquisition of writing skills. Closely related to L1 and L2 acquisition/development are studies of bilingualism/multilingualism and the teaching and learning of foreign languages, including Japanese as a second language, where topics discussed include cross-lingual transfer from L1 to L2, learning errors, and proficiency assessment of second language acquisition. Chapters dealing with topics more squarely falling in the domain of applied linguistics cover the issues in corpus/computational linguistics (including discussions on CHILDES for Japanese and the KY corpus widely-used in research on Japanese as a second language), clinical linguistics (including discussions on language development in children with hearing impairment and other language disorders, with Down syndrome, or autism), and translation and interpretation. Technically speaking, Japanese Sign Language is not a variety of Japanese. However, in view of the importance of this language in Japanese society and because of the rapid progress in sign language research in Japan and abroad and what it has to offer to the general theory of language, chapters dealing with Japanese Sign Language are also included in this volume.

## 7 Grammatical Sketch of Standard Japanese

The following pages offer a brief overview of Japanese grammar as an aid for a quick grasp of the structure of Japanese that may prove useful in studying individual, thematically organized handbooks of this series. One of the difficult problems in presenting non-European language materials using familiar technical terms derived from the European grammatical tradition concerns mismatches between what the glosses may imply and what grammatical categories they are used to denote in the description. We will try to illustrate this problem below as a way of warning not to take all the glosses at their face value. But first some remarks are in order about the conventions of transcription of Japanese, glossing of examples, and their translations used in this series.

### 7.1 Writing, alphabetic transcription, and pronunciation

Customarily, Japanese is written by using a mixture of Chinese characters (for content words), *hiragana* (for function words such as particles, suffixes and inflectional endings), *katakana* (for foreign loans and mimetics), and sometimes Roman alphabet.

Because Japanese had no indigenous writing system, it developed two phonogram systems of representing a phonological unit of “mora”, namely *hiragana* and *katakana*, by simplifying or abbreviating (parts of) Chinese characters. *Hiragana* and *katakana* syllabaries are shown in Table 1, together with the alphabetic transcriptions adopted in the HJLL series.

**Table 1:** *Alphabetic transcriptions adopted in HJLL*

transcription	<i>a</i>	<i>ka</i>	<i>sa</i>	<i>ta</i>	<i>na</i>	<i>ha</i>	<i>ma</i>	<i>ya</i>	<i>ra</i>	<i>wa</i>	<i>n</i>
<i>hiragana</i>	あ	か	さ	た	な	は	ま	や	ら	わ	ん
<i>katakana</i>	ア	カ	サ	タ	ナ	ハ	マ	ヤ	ラ	ワ	ン
transcription	<i>i</i>	<i>ki</i>	<i>si</i>	<i>ti</i>	<i>ni</i>	<i>hi</i>	<i>mi</i>	–	<i>ri</i>	–	
<i>hiragana</i>	い	き	し	ち	に	ひ	み	–	り	–	
<i>katakana</i>	イ	キ	シ	チ	ニ	ヒ	ミ	–	リ	–	
transcription	<i>u</i>	<i>ku</i>	<i>su</i>	<i>tu</i>	<i>nu</i>	<i>hu</i>	<i>mu</i>	<i>yu</i>	<i>ru</i>	–	
<i>hiragana</i>	う	く	す	つ	ぬ	ふ	む	ゆ	る	–	
<i>katakana</i>	ウ	ク	ス	ツ	ヌ	フ	ム	ユ	ル	–	
transcription	<i>e</i>	<i>ke</i>	<i>se</i>	<i>te</i>	<i>ne</i>	<i>he</i>	<i>me</i>	–	<i>re</i>	–	
<i>hiragana</i>	え	け	せ	て	ね	へ	め	–	れ	–	
<i>katakana</i>	エ	ケ	セ	テ	ネ	ヘ	メ	–	レ	–	
transcription	<i>o</i>	<i>ko</i>	<i>so</i>	<i>to</i>	<i>no</i>	<i>ho</i>	<i>mo</i>	<i>yo</i>	<i>ro</i>	<i>o</i>	
<i>hiragana</i>	お	こ	そ	と	の	ほ	も	よ	ろ	を	
<i>katakana</i>	オ	コ	ソ	ト	ノ	ホ	モ	ヨ	ロ	ヲ	

Because of phonological change, the columns indicated by strikethroughs have no letters in contemporary Japanese, although they were filled in with special letters in classical Japanese. If all the strikethroughs were filled, the chart will contain 50 letters for each of *hiragana* and *katakana*, so the syllabary chart is traditionally called *Gojū-on zu* (chart of 50 sounds). To these should be added the letter ん or ン representing a moraic nasal [N], on the rightmost column.

The “50-sound chart”, however, does not exhaust the *hiragana* and *katakana* letters actually employed in Japanese, because the basic consonant sounds (*k*, *s*, *t*, *h*) have variants. The sound represented by the letter *h* is historically related to the sound represented by *p*, and these voiceless obstruents (*k*, *s*, *t*, and *p*) have their respective voiced counterparts (*g*, *z*, *d*, and *b*). Table 2 shows letters for these consonants followed by five vowels.



**Table 2:** *Letters for voiced obstruents and bilabial [p]*

transcription	<i>ga</i>	<i>za</i>	<i>da</i>	<i>ba</i>	<i>pa</i>
<i>hiragana</i>	が	ざ	だ	ば	ぱ
<i>katakana</i>	ガ	ザ	ダ	バ	パ
transcription	<i>gi</i>	<i>zi</i>	<i>zi</i>	<i>bi</i>	<i>pi</i>
<i>hiragana</i>	ぎ	じ	ぢ	び	ぴ
<i>katakana</i>	ギ	ジ	ヂ	ビ	ピ
transcription	<i>gu</i>	<i>zu</i>	<i>zu</i>	<i>bu</i>	<i>pu</i>
<i>hiragana</i>	ぐ	ず	づ	ぶ	ぷ
<i>katakana</i>	グ	ズ	ヅ	ブ	プ
transcription	<i>ge</i>	<i>ze</i>	<i>de</i>	<i>be</i>	<i>pe</i>
<i>hiragana</i>	げ	ぜ	で	べ	ぺ
<i>katakana</i>	ゲ	ゼ	デ	ベ	ペ
transcription	<i>go</i>	<i>zo</i>	<i>do</i>	<i>bo</i>	<i>po</i>
<i>hiragana</i>	ご	ぞ	ど	ぼ	ぽ
<i>katakana</i>	ゴ	ゾ	ド	ボ	ポ

It is important to note that Tables 1 and 2 show the conventional letters and alphabetical transcription adopted by the HJLL series; they are not intended to represent the actual pronunciations of Japanese vowels and consonants. For example, among the vowels, the sound represented as “u” is pronounced as [u] with unrounded lips. Consonants may change articulation according to the following vowels. Romanization of these has been controversial with several competing proposals.

There are two Romanization systems widely used in Japan. One known as the Hepburn system is more widely used in public places throughout Japan such as train stations, street signs, as well as in some textbooks for learners of Japanese. This system is ostensibly easier for foreigners familiar with the English spelling system. The *Kunreishiki* (the cabinet ordinance system) is phonemic in nature and is used by many professional linguists. The essential differences between the two Romanization systems center on palatalized and affricate consonants, as shown in Table 3 below by some representative syllables for which two Romanization renditions differ:

**Table 3:** *Two systems of Romanization*

Hiragana	IPA	Hepburn	Kunreishiki
し	[ʃi]	shi	si
しゃ	[ʃa]	sha	sya
しゅ	[ʃɯ]	shu	syu
しょ	[ʃo]	sho	syo
じ and ぢ	[dʒi]	ji	zi
じゃ	[dʒa]	ja	zya
じゅ	[dʒɯ]	ju	zyu
じょ	[dʒo]	jo	zyo
ち	[tʃi]	chi	ti
ちゃ	[tʃa]	cha	tya
ちゅ	[tʃɯ]	chu	tyu
ちょ	[tʃo]	cho	tyo
つ	[tsw]	tsu	tu
づ and ず	[dzw]	zu	zu
ふ	[ɸɯ]	fu	hu

Except for the volumes on Ryukyuan, Ainu, and Japanese dialects, whose phonetics differ from Standard Japanese, HJLL adopts the Kunreishiki system for rendering cited Japanese words and sentences but uses the Hepburn system for rendering conventional forms such as proper nouns and technical linguistic terms in the text and in the translations of examples.

The cited Japanese sentences in HJLL look as below, where the first line transliterates a Japanese sentence in Kunreishiki Romanization, the second line contains interlinear glosses largely following the Leipzig abbreviation convention, and the third line is a free translation of the example sentence.

- (1) *Taroo wa Ziroo to Tookyoo e it-te kutusita o kat-ta.*  
 Taro TOP Jiro COM Tokyo ALL go-GER sock ACC buy-PST  
 ‘Taro went to Tokyo with Jiro and bought socks.’

The orthographic convention of rendering Japanese is to represent a sentence with an uninterrupted sequence of Sino-Japanese characters and *katakana* or *hiragana* syllabaries without a space for word segmentation, as in 太郎は次郎と東京へ行って靴下を買った for (1). In line with the general rules of Romanization adopted in

books and articles dealing with Japanese, however, HJLL transliterates example sentences by separating word units by spaces. The example in (1) thus has 10 words. Moreover, as in *it-te* (go-GERUNDIVE) and *kat-ta* (buy-PAST) in (1), word-internal morphemes are separated by a hyphen whenever necessary, although this practice is not adopted consistently in all of the HJLL volumes. Special attention should be paid to particles like *wa* (topic), *to* ‘with’ and *e* ‘to, toward’, which, in the HJLL representation, are separated from the preceding noun or noun phrase by a space (see section 7.3). Remember that case and other kinds of particles, though spaced, form phrasal units with their preceding nouns.

## 7.2 Word order

As seen in (1), Japanese is a verb-final, dependent-marking agglutinative language. It is basically an SOV language, which marks the nominal dependent arguments by particles (*wa*, *to*, *e*, and *o* above), and whose predicative component consists of a verbal-stem, a variety of suffixes, auxiliary verbs, and semi-independent predicate extenders pertaining to the speech act of predication (see section 7.7). While a verb is rigidly fixed in sentence final position, the order of subject and object arguments may vary depending on pragmatic factors such as emphasis, background information, and cohesion. Thus, sentence (2a) with the unmarked order below, in principle, may vary in multiple ways as shown by some possibilities in (2b)–(2d).

- (2) a. *Taroo ga Hanako ni Ziroo o syookai-si-ta.*  
       Taro   NOM Hanako   DAT Jiro   ACC introducing-do-PST  
       ‘Taro introduced Jiro to Hanako.’  
       b. *Taroo ga **Ziroo o** Hanako ni syookai-si-ta.*  
       c. ***Hanako ni** Taroo ga Ziroo o syookai-si-ta.*  
       d. ***Ziroo o** Taroo ga Hanako ni syookai-si-ta.*

Adverbs, likewise, can be rather freely placed, though each type of adverbs has its basic position.

- (3) a. ***Saiwainimo** Hanako ga gohan o tai-te kure-te i-ta.*  
       luckily       Hanako   NOM rice   ACC cook-GER GIVE-GER BE-PST  
       ‘Luckily Hanako had done the favor of cooking the rice (for us).’  
       b. *Hanako ga **saiwainimo** gohan o tai-te kure-te i-ta.*  
       c. *Hanako ga gohan o **saiwainimo** tai-te kure-te i-ta.*

Notice that while the verbal complex in the sentence above is not as tightly organized as a complex involving suffixes, a sentence adverb cannot be placed within the verbal complex, showing that the sequence of *tai-te kure-te i-ta* forms a tighter constituent,

which, however, permits insertion of the topic particle *wa* after each of the gerundive forms. (See section 7.5 below on the nature of gerundive forms in Japanese.)

As the normal position of sentence adverbs is sentence initial, manner and resultative adverbs have an iconically-motivated position, namely before and after the object noun phrase, respectively, as below, though again these adverbs may move around with varying degrees of naturalness:

- (4) *Hanako ga isoide gohan o tai-te kure-ta.*  
 Hanako NOM hurriedly rice ACC cook-GER GIVE-PST  
 ‘Hanako did the favor of cooking the rice hurriedly (for us).’
- (5) *Hanako ga gohan o yawarakaku tai-te kure-ta.*  
 Hanako NOM rice ACC softly cook-GER GIVE-PST  
 ‘Hanako did the favor of cooking the rice soft (for us).’

The fact that an object noun phrase can be easily separated from the verb, as in (2b.d), and that adverbs can freely intervene between an object and a verb, as in (5), has raised the question whether Japanese has a verb phrase consisting of a verb and an object noun phrase as a tightly integrated constituent parallel to the VP in English (cf. \**cook hurriedly the rice* – the asterisk marks ungrammatical forms).

### 7.3 NP structure

Noun phrases, when they occur as arguments or adjuncts, are marked by case particles or postpositions that are placed after their host nouns. Because case markers can be set off by a pause, a filler, or even longer parenthetical material, it is clear that they are unlike declensional affixes in inflectional languages like German or Russian. Their exact status, however, is controversial; some researchers regard them as clitics and others as (non-independent) words.

Elaboration of Japanese noun phrases is done by prenominal modifiers such as a demonstrative, a genitive noun phrase, or an adjective, as below, indicating that Japanese is a consistent head-final language at both nominal and clausal levels.

- (6) a. *kono Taroo no kaban*  
       this Taro GEN bag  
       lit. ‘this Taro’s bag’
- b. *Taroo no kono kaban*  
       Taro GEN this bag  
       lit. ‘Taro’s this bag’

Japanese lacks determiners of the English type that “close off” NP expansion. The literal translations of the Japanese forms above are ungrammatical, indicating that English determiners like demonstratives and genitive noun phrases do not allow further expansion of an NP structure. Also seen above is the possibility that prenominal modifiers can be reordered just like the dependents at the sentence level. The order of prenominal modifiers, however, is regulated by the iconic principle of placing closer to the head noun those modifiers that have a greater contribution in specifying the nature and type of the referent. Thus, descriptive adjectives tend to be placed closer to a head noun than demonstratives and genitive modifiers of non-descriptive types. Interesting is the pattern of genitive modifiers, some of which are more descriptive and are placed closer to the head noun than others. Genitives of the same semantic type, on the other hand, can be freely reordered. Compare:

- (7) a. *Yamada-sensei no kuroi kaban*  
 Yamada-professor GEN black bag  
 ‘Professor Yamada’s black bag’  
 b. \**kuroi Yamada-sensei no kaban*  
 (O.K. with the reading of ‘a bag of Professor Yamada who is black’)
- (8) a. *Yamada-sensei no gengogaku no koogi*  
 Yamada-professor GEN linguistics GEN lecture  
 ‘Professor Yamada’s linguistics lecture’  
 b. \**gengogaku no Yamada-sensei no koogi*  
 (O.K. with the reading of ‘a lecture by Professor Yamada of linguistics’)
- (9) a. *Yamada-sensei no kinoo no koogi*  
 Yamada-professor GEN yesterday GEN lecture  
 lit. ‘Professor Yamada’s yesterday’s lecture’ ‘Yesterday’s lecture by Professor Yamada’  
 b. *Kinoo no Yamada-sensei no koogi*
- (10) a. *oomori no sio-azi no raamen*  
 big.serving GEN salt-tasting GEN ramen  
 lit. ‘big-serving salt-tasting ramen noodles’  
 b. *sio-azi no oomori no raamen*
- (11) a. *atui sio-azi no raamen*  
 hot salt-tasting GEN ramen  
 ‘hot salt-tasting ramen noodles’  
 b. *sio-azi no atui ramen*

Numeral classifiers (CLFs) pattern together with descriptive modifiers so that they tend to occur closer to a head noun than a possessive genitive phrase.

- (12) a. *Taroo no san-bon no enpitu*  
           Taro GEN three-CLF GEN pencil  
           ‘Taro’s three pencils’  
       b. \**san-bon no Taroo no enpitu*

Numeral classifiers also head an NP, where they play a referential function and where they can be modified by a genitive phrase or an appositive modifier, as in (13a.b). They may also “float” away from the head noun and become adverbial, as in (13c).

- (13) a. *Taroo wa gakusei no san-nin o mikake-ta.*  
           Taro TOP student GEN three-CLF ACC see.by.chance-PST  
           ‘Taro saw three of students by chance.’  
       b. *Taroo wa gakusei san-nin o mikake-ta.*  
           Taro TOP student three-CLF ACC see.by.chance-PST  
           lit. ‘Taro saw student-threes by chance.’  
       c. *Taroo wa gakusei o san-nin mikake-ta.*  
           Taro TOP student ACC three-CLF see.by.chance-PST  
           ‘Taro saw students, three (of them), by chance.’

As in many other SOV languages, the so-called relative clauses are also prenominal and are directly placed before their head nouns without the mediation of “relative pronouns” like the English *which* or *who* or “complementizers” like *that*. The predicates in relative clauses are finite, taking a variety of tense and aspect. The subject may be replaced by a genitive modifier. Observe (14a).

- (14) a. *Boku mo [Taroo ga/no kat-ta] hon o kat-ta.*  
           I ADVPART Taro NOM/GEN buy-PST book ACC buy-PST  
           ‘I also bought the book which Taro bought.’  
       b. *Boku mo [Taroo ga/no kat-ta] no o kat-ta.*  
           I ADVPART Taro NOM/GEN buy-PST NM ACC buy-PST  
           ‘I also bought the one which Taro bought.’

The structure used as a modifier in the relative clause construction can also head a noun phrase, where it has a referential function denoting an entity concept evoked by the structure. In Standard Japanese such a structure is marked by the nominalization particle *no*, as in (14b).

## 7.4 Subject and topic

Some of the sentences above have noun phrases marked by the nominative case particle *ga* and some by the topic marker *wa* for what appear to correspond to the subject noun phrases in the English translations. This possibility of *ga*- and *wa*-marking is seen below.

- (15) a. *Yuki ga siro-i.*  
           snow NOM white-PRS  
           ‘The snow is white.’
- b. *Yuki wa siro-i.*  
           snow TOP white-PRS  
           ‘Snow is white.’

As the difference in the English translations indicates, these two sentences are different in meaning. Describing the differences between topic and non-topic sentences has been a major challenge for Japanese grammarians and teachers of Japanese alike. The difference in the English translations above, however, is indicative of how these two sentences might differ in meaning. Sentence (15a) describes a state of affairs involving specific snow just witnessed, whereas (15b) is a generic statement about a property of snow unbounded by time. Thus, while (15a) would be uttered only when the witnessed snow is indeed white, (15b) would be construed true even though we know that there are snow piles that are quite dirty.

A similar difference is seen in verbal sentences as well.

- (16) a. *Tori ga tob-u.*  
           bird NOM fly-PRS  
           ‘A bird is flying/is about to fly.’
- b. *Tori wa tob-u.*  
           bird TOP fly-PRS  
           ‘Birds fly.’

Non-topic sentences like (15a) and (16a) are often uttered with an exclamation accompanying a sudden discovery of a state of affairs unfolding right in front of one’s eyes. The present tense forms (*-i* for adjectives and *-(r)u* for verbs) here anchor the time of this discovery to the speech time. The present tense forms in (15b) and (16b), on the other hand, mark a generic tense associated with a universal statement.

These explanations can perhaps be extended to a time-bound topic sentence seen in (17b) below.

- (17) a. *Taroo ga hasit-ta.*  
           Taro    NOM run-PST  
           ‘Taro NOM ran.’
- b. *Taroo wa hasit-ta.*  
           Taro    TOP run-PST  
           ‘Taro ran.’

That is, while (17a) reports an occurrence of a particular event at a time prior to the speech time, (17b) describes the nature of the topic referent – that Taro was engaged in the running activity – as a universal truth of the referent, but universal only with respect to a specifically bound time marked by the past tense suffix.

Topics need not be a subject, and indeed any major sentence constituent, including adverbs, may be marked topic in Japanese, as shown below.

- (18) a. *Sono hon wa Taroo ga yon-de i-ru.*  
           that book TOP Taro    NOM read-GER BE-PRS  
           ‘As for that book, Taro is reading (it).’
- b. *Kyoo wa tenki ga yo-i.*  
           today TOP weather NOM good-PRS  
           ‘As for today, the weather is good.’
- c. *Sonnani wa hayaku wa hasir-e na-i.*  
           that.way TOP quickly TOP run-POTEN NEG-PRS  
           ‘That quickly, (I) cannot run.’

## 7.5 Complex sentences

As in many Altaic languages, compound sentences in Japanese do not involve a coordinate conjunction like English *and*. Instead, clauses are connected by the use of inflected verb forms, as in (19a) below, where the *-i* ending is glossed in the HJLL series as either INF (infinitive) or ADVL (adverbial) following the Japanese term *ren'yō-kei* for the form. While the *-i* ending in the formation of compound sentences is still used today, especially in writing, the more commonly used contemporary form involves a conjunctive particle *-te* following the *-i* infinitive form, as in (19b) below. In HJLL, this combination is glossed as GER (gerundive), though the relevant Japanese forms do not have the major nominal use of English gerundive forms.

- (19) a. *Hana wa sak-i, tori wa uta-u.*  
           flower TOP bloom-INF bird TOP sing-PRS  
           ‘Flowers bloom and birds sing.’



- b. *Hana wa sa.i-te, tori wa uta-u.*  
 flower TOP bloom-GER bird TOP sing-PRS  
 ‘Flowers bloom and birds sing.’

Both the *-i* and *-te* forms play important roles in Japanese grammar. They are also used in clause-chaining constructions for serial events (20a), and in complex sentences (20b)–(20d), as well as in numerous compound verbs (and also in many compound nouns) such as *sak-i hokoru* (bloom-INF boast) ‘be in full bloom’, *sak-i tuzukeru* (bloom-INF continue) ‘continue blooming’, *sa.i-te iru* (bloom-GER BE) ‘is blooming’, and *sa.i-te kureru* (bloom-GER GIVE) ‘do the favor of blooming (for me/us)’.

- (20) a. *Taroo wa [ok-i/ok.i-te], [kao o ara-i/arat-te],*  
 Taro TOP rise-INF/rise-GER face ACC wash-INF/wash-GER  
*[gohan o tabe-ta].*  
 meal ACC eat.PST  
 ‘Taro got up, washed his face, and ate a meal.’
- b. *Taroo wa [sakana o tur-i] ni it-ta.*  
 Taro TOP fish ACC catch-INF DAT go-PST  
 ‘Taro went to catch fish.’
- c. *Taroo wa [aruk-i nagara] hon o yon-da.*  
 Taro TOP walk-INF SIMUL book ACC read-PST  
 ‘Taro read a book while walking.’
- d. *Taroo wa [Hanako ga ki-ta no] ni awa-na-katta.*  
 Taro TOP Hanako NOM come-PST NM DAT see-NEG-PST.  
 ‘Taro did not see (her), even though Hanako came.’

(20d) has the nominalized clause marked by the particle *no* followed by the dative *ni*, also seen in (20b) marking the purposive form. Now the *no-ni* sequence has been reanalyzed as a concessive conjunction meaning ‘even though’.

## 7.6 Context dependency

The context dependency of sentence structure in Japanese is much more clearly pronounced than in languages like English. Indeed, it is rare that Japanese sentences express all the arguments of a verb such as a subject (or topic) and an object noun phrase included in the sentences used above for illustrative purposes. A typical dialog would take the following form, where what is inferable from the speech context is not expressed.

- (21) a. Speaker A: *Tokorode, Murakami Haruki no saisin-saku yon-da ka.*  
                   by.the.way Murakami Haruki GEN newest-work read-PST Q  
                   ‘By the way, have (you) read Haruki Murakami’s latest work?’
- b. Speaker B: *Un, moo yon-da.*  
                   uh-hu already read-PST  
                   ‘Uh-hu, (I) already read (it)’.

In (21a) A’s utterance is missing a subject noun phrase referring to the addressee, and B’s response in (21b) is missing both subject and object noun phrases. In some frameworks, sentences like these are analyzed as containing zero pronouns or as involving a process of “pro drop”, which deletes assumed underlying pronouns. This kind of analysis, however, ignores the role of speech context completely and incorporates information contextually available into sentence structure. In an analysis that takes seriously the dialogic relationship between speech context and sentence structure, the expressions in (21) would be considered full sentences as they are.

## 7.7 Predicative verbal complexes and extenders

Coding or repeating contextually determinable verb phrases, as in (21b), is less offensive than expressing contextually inferable noun phrases presumably because verb phrases have the predication function of assertion, and because they also code a wide range of other types of speech acts and of contextual information pertaining to the predication act. Declarative sentences with plain verbal endings like the one in (21b) are usable as “neutral” expressions in newspaper articles and literary works, where no specific reader is intended. In daily discourse, the plain verbal forms “explicitly” code the speaker’s attitude toward the hearer; namely, that the speaker is treating the hearer as his equal or inferior in social standing, determined primarily by age, power, and familiarity. If the addressee were socially superior or if the occasion demanded formality, a polite, addressee honorific form with the suffix *-masu* would be used, as below.

- (22) *Hai, moo yom-i-masi-ta.*  
       yes already read-INF-POL-PST  
       ‘Yes, (I have) already read (it).’

The referent honorific forms are used when the speaker wishes to show deference toward the referent of arguments – subject honorific and object honorific (or humbling) forms depending on the type of argument targeted. If (21b) were to be uttered in reference to a social superior, the following would be more appropriate:

- (23) *Un, (Yamada-sensei wa) moo yom-are-ta.*  
 uh-hu (Yamada-professor TOP) already read-SUB.HON-PST  
 ‘Uh-hu, (Professor Yamada has) already read (it).’

This can be combined with the polite ending *-masu*, as below, where the speaker’s deference is shown to both the referent of the subject noun phrase and the addressee:

- (24) *Hai, (Yamada-sensei wa) moo yom-are-masi-ta.*  
 Yes (Yamada-professor TOP) already read-HON-POL-PST  
 ‘Yes, (Professor Yamada has) already read (it).’

As these examples show, Japanese typically employs agglutinative suffixes in the elaboration of verbal meanings associated with a predication act. The equivalents of English auxiliary verbs are either suffixes or formatives connected to verb stems and suffixed forms in varying degrees of tightness. These are hierarchically structured in a manner that expresses progressively more subjective and interpersonal meaning as one moves away from the verb-stem core toward the periphery. For example, in the following sentence a hyphen marks suffixal elements tightly bonded to the preceding form, an equal sign marks a more loosely connected formative, which permits insertion of certain elements such as the topic particle *wa*, and a space sets off those elements that are independent words following a finite predicate form, which may terminate the utterance.

- (25) *(Taroo wa) ik-ase-rare-taku=na-katta rasi-i mitai des-u wa.*  
 (Taro TOP) go-CAUS-PASS-DESI=NEG-PST CONJEC-PRS UNCERT POLCOP-PRS SFP  
 ‘(Taro) appears to seem to not want to have been forced to go, I tell you.’

The final particle *wa* above encodes the information that the speaker is female. A male speaker would use *yo* or *da yo*, the latter a combination of the plain copula and *yo*, instead of *desu wa* above, or combinations such as *da ze* and *da zo* in rough speech.

Non-declarative Japanese sentences, on the other hand, frequently suppress auxiliary verbs, the copula, and the question particle especially in casual speech, where intonation and tone of voice provide clues in guessing the intended speech act. Casual interrogatives take the form of (26a) with a nominalization marker bearing a rising intonation, marked by the question mark in the transcription, whereas fuller versions have the interrogative particle *ka* or a combination of the polite copula and *ka*, as in (26b).

- (26) a. *Moo kaeru no?*  
 already return NM  
 ‘Going home already?’

- b. *Moo kaeru no (desu) ka.*  
 already return NM (POLCOP) Q  
 ‘Going home already?’

Requests are made with the aid of an auxiliary-like “supporting” verb *kureru* ‘GIVE (ME THE FAVOR OF. . .)’, its polite form *kudasai*, or its intimate version *tyoodai*, as seen in (27a). Again, these forms are often suppressed in a highly intimate conversation and may result in a form like (27b).

- (27) a. *Hayaku kaet-te kure/kudasai/tyoodai.*  
 soon return-GER GIVE/GIVE.POL/GIVE.INTI  
 ‘(Please) come home soon (for me/us).’  
 b. *Hayaku kaet-te ne.*  
 soon return-GER SFP  
 ‘(Please) come home soon, won’t you?’

The use of dependent forms (e.g., the gerundive *-te* form above) as independent sentences is similar to that of subjunctive forms of European languages as independent sentences, as illustrated by the English sentence below.

- (28) *If you would give me five thirty-cent stamps.*

Conditionals are used as independent suggestion sentences in Japanese as well. For example, (29a) has a fuller version like (29b) with the copula as a main-clause verb, which can also be suppressed giving rise to the truncated form (29c).

- (29) a. *Hayaku kaet-tara?*  
 quickly return-COND  
 lit. ‘If return quickly.’ ‘Why don’t you go home quickly?’  
 b. *Hayaku kaet-tara ikaga desu ka.*  
 quickly return-COND how POLCOP Q  
 lit. ‘How is it if (you) went home quickly?’  
 c. *Hayaku kaet-tara ikaga?*  
 quickly return-COND how  
 ‘Why don’t (you) go home quickly?’

Understanding Japanese utterances requires full recourse to the elements of speech context, such as the nature of the speaker and the hearer and the social relationship between them, the information “in the air” that is readily accessible to the interlocutors, and the formality of the occasion. Indeed, the difficult part of the art of

speaking Japanese is knowing how much to leave out from the utterance and how to infer what is left unsaid.

## 8 Conclusion

Many of the interesting topics in Japanese grammar introduced above are discussed in great detail in the Lexicon-Word formation handbook and the Syntax volume. The Historical handbook also traces developments of some of the forms and constructions introduced above. The Sociolinguistics volume gives fuller accounts of the sentence variations motivated by context and discourse genre.

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## Appendix: List of abbreviations for HJLL

1	first person
2	second person
3	third person
A	agent-like argument of canonical transitive verb
ABL	ablative
ACC	accusative
ACOP	adjectival copula
ADJ	adjective
ADN	adnominal
ADV	adverb(ial(izer))
ADVL	adverbial
ADVPART	adverbial particle
AGR	agreement
AGT	agent
ALL	allative
AN	adjectival noun

ANTIP	antipassive
AP	adverbial particle, adjective phrase
APPL	applicative
ART	article
ASP	aspect
ATTR	attributive
AUX	auxiliary
AUXV	auxiliary verb
C	consonant
CAUS	causative
CLF	classifier
COHORT	cohortative
COM	comitative
COMP	complementizer
COMPL	completive
CONC	concessive
CONCL	conclusive
COND	conditional
CONJEC	conjectural
CONJCT	conjunctive
CONT	continuative
COP	copula
CVB	converb
DAT	dative
D	demonstrative
DECL	declarative
DEF	definite
DEM	demonstrative
DET	determiner
DESI	desiderative
DIST	distal
DISTR	distributive
DO	direct object
DU	dual
DUR	durative
EMPH	emphatic
ERG	ergative
ETOP	emphatic topic
EVID	evidential
EXCL	exclamatory, exclusive
EXPL	expletive
FOC	focus

FUT	future
GEN	genitive
GER	gerund(ive)
H	high (tone or pitch)
HON	honorific
HUM	humble
IMP	imperative
INCL	inclusive
IND	indicative
INDEF	indefinite
INF	infinitive
INS	instrumental
INT	intentional
INTERJEC	interjection
INTI	intimate
INTR	intransitive
IO	indirect object
IRR	irrealis
ITERA	iterative
k-irr	k-irregular ( <i>ka-hen</i> )
L	low (tone or pitch)
LB	lower bigrade ( <i>shimo nidan</i> )
LM	lower monograde ( <i>shimo ichidan</i> )
LOC	locative
MPST	modal past
MVR	mid vowel raising
N	noun
n-irr	n-irregular ( <i>na-hen</i> )
NCONJ	negative conjectual
NEC	neccessitive
NEG	negative
NM	nominalization marker
NMLZ	nominalization/nominalizer
NMNL	nominal
NOM	nominative
NONPST	nonpast
NP	noun phrase
OBJ	object
OBL	oblique
OPT	optative
P	patient-like argument of canonical transitive verb, preposition, post-position

PART	particle
PASS	passive
PCONJ	present conjectural
PERF	perfective
PL	plural
POL	polite
POLCOP	polite copula
POSS	possessive
POTEN	potential
PP	prepositional/postpositional phrase
PRED	predicative
PRF	perfect
PRS	present
PRES	presumptive
PROG	progressive
PROH	prohibitive
PROV	provisional
PROX	proximal/proximate
PST	past
PSTCONJ	past conjectural
PTCP	participle
PURP	purposive
Q	question/question particle/question marker
QD	quadrigrade ( <i>yodan</i> )
QUOT	quotative
r-irr	r-irregular ( <i>ra-hen</i> )
REAL	realis
RECP	reciprocal
REFL	reflexive
RES	resultative
RESP	respect
S	single argument of canonical intransitive verb, sentence
SBJ	subject
SBJV	subjunctive
SFP	sentence final particle
SG	singular
SIMUL	simultaneous
s-irr	s-irregular ( <i>sa-hen</i> )
SPON	spontaneous
SPST	simple past
STAT	stative
TOP	topic



TR	transitive
UB	upper bigrade ( <i>kami-nidan</i> )
UNCERT	uncertain
UM	upper monograde ( <i>kami-ichidan</i> )
V	verb, vowel
VN	verbal noun
VOC	vocative
VOL	volitional
VP	verb phrase

## Languages

ConJ	contemporary Japanese
EMC	Early Middle Chinese
EMJ	Early Middle Japanese
EOJ	Eastern Old Japanese
J-Ch	Japano-Chinese
LMC	Late Middle Chinese
LMJ	Late Middle Japanese
JPN	Japanese
MC	Middle Chinese
MJ	Middle Japanese
MK	Middle Korean
ModJ	Modern Japanese
OC	Old Chinese
OJ	Old Japanese
pJ	proto-Japanese
pK	proto-Korean
SJ	Sino-Japanese
Skt	Sanskrit



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# Introduction

## 1 Goals and scope of the volume

In linguistic research, contrastive and typological approaches have the merit of revealing new facts of a given language that would go unnoticed were the researcher's eyes limited to that language alone. In fact, the Japanese language has a fairly long tradition of contrastive studies with special reference to English and other major Western languages as well as to neighboring languages in Asia, especially Korean and Chinese, and these studies have brought forth an abundance of new discoveries from a variety of theoretical, descriptive, and typological perspectives.

Dedicated to comparative studies between Japanese and more than two dozen languages of the world, this handbook, comprising 25 chapters, is intended to weave together three types of linguistic strands – traditional descriptive grammar, functional-typological linguistics, and generative- or cognitive-oriented theoretical linguistics – and make important contributions to deepening our understanding of various phenomena in Japanese in particular and human language in general. Its primary goal is to uncover principled similarities and differences between Japanese and other languages and thereby shed new light on the universality and language-particularity of Japanese. The issues addressed by the 25 chapters cover a wide spectrum of phenomena ranging from lexical to syntactic and semantic issues. The authors of the chapters, leading scholars in their respective field of research, present state-of-the-art research on selected topics, reviewing previous literature inside and outside of Japan. To date, no such publication of comparable depth and breadth has been available for Japanese or any other single language. This handbook will thus be a valuable reference for both theoretical and descriptive linguists, typologists, Japanese-language educators, and students working on Japanese.

## 2 A brief survey of contrastive linguistic research on Japanese

In sharp contrast to Western linguistics, which is essentially comparative and contrastive in nature due to its origin from historical and comparative inquiries of Indo-European languages in the 18th and 19th centuries, *Kokugogaku* (lit. 'the study of Japan's national language'), developed in the 19th and 20th centuries, tends to narrowly focus on philological inquiries into language-internal properties specific

to *kokogo* ('Japan's national language'). The reason for the general absence of contrastive and universal standpoints in *Kokugogaku* being for the most part sought in the social and political situations in the early stages of Japan's modernization, it was not until the 1970s, when Noam Chomsky's generative grammar and Joseph Greenberg's language typology became popular in Japan, that domestic researchers began to realize that contrastive, typological, and universal orientations were important even for the studies of the national language, and they consequently decided to change the term *Kokugogaku* to *Nihongogaku* 'studies on the Japanese language'. Even so, however, researchers who are trained in the *Kokugogaku* and *Nihongogaku* disciplines generally remain occupied with the details of internal structures of Japanese without paying much heed to other languages.

On the other hand, researchers with theoretical orientations or researchers/teachers of particular foreign languages interested in pedagogical applications have actively participated in contrastive and typological studies. There is indeed a steady stream of interest in contrastive research among these researchers, as witnessed by the constant publication of books targeted squarely at comparison of Japanese with other languages, such as the *Gengo* special issue on contrastive linguistics (December 1981, Taishukan), Teramura, Kunihiro and Tamamura (1982), *Gengo* special issues on language typology (November 1982 and September 1994, Taishukan), *Nichi-eigo taishō-kenkyū shirizu* [Japanese-English contrastive research series] (9 volumes, 1992–2005, Kurosio Publishers), Ogoshi (2002), Satō, Horie and Nakamura (2004), and *Shirizu gengo-taishō: Soto kara mita Nihongo* [Contrastive linguistics series: Japanese viewed from outside] (11 volumes, 2004–2017, Kurosio Publishers). Outside of Japan, there is also a wealth of doctoral dissertations at American and European universities dealing with comparison of Japanese with English or other languages in generative and other theoretical frameworks, such as Kageyama (1977) and Fukui (1986) to name only two examples from the earliest days.

The present volume covers two major research paradigms aimed at the elucidation of the unity and diversity among the world's language: (i) theoretical studies in the frameworks of generative grammar and cognitive linguistics and (ii) descriptively oriented studies couched in the functional-typological framework. The topics addressed in the volume range over a wide variety of fundamental as well as cutting-edge issues in the fields of semantics, syntax, morphology, and pragmatics, but to the exclusion of phonology. The non-Japanese languages discussed with concrete examples in this volume, listed below, cover almost all quarters of the globe from various parts of Asia to Europe to Africa, to Australia and America.



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Halkomelem (12)	Sidaama (11)
Hawaiian (16)	Sinhala (2)
Hebrew (12)	Spanish (12, 17, 22)
Hindi (2, 12)	Swedish (16)
Hinuq (13)	Swahili (14)
Hixkaryana (12)	Tapiete (12)
Imbabura Quechua (12)	Tamil (13)
Italian (16)	Telugu (12)
Kalkatungu (12)	Thai (6, 10, 12, 17, 23)
Kamaiurá (12)	Toba (12)
Kannada (2)	Turkish (7, 12)
Kanuri (12)	Tuyuca (12)
K'ichee' (12)	Warrongo (19)
Kashibo-Kakataibo (12)	Welsh (16)
Korean (3, 4, 12, 17, 25)	Yagua (12)
Koryak (24)	Yaqui (12)
Lahu (12)	Yoruba (12)

N.B. The numbers in parentheses stand for the relevant chapter numbers.

### 3 Organization of the volume

This book comprises 25 chapters that explore theoretically or descriptively interesting facets of Japanese syntax, semantics, and morphology and discuss them in typological and universal perspectives or in comparison with individual languages of the author's specialization. The chapters are topically grouped into three parts on the basis of the nature and relatedness of the phenomena they address.

**PART I “VERBAL CONSTRUCTIONS AND RELATED ISSUES”** is devoted to transitivity, valency, voice, lexical meanings, event descriptions, and other phenomena surrounding verbs. The first four chapters start out with the central topics of Japanese syntax and semantics, namely transitivity and voice. In **Chapter 1 “Transitivity in Japanese from a typological perspective”**, Prashant Pardeshi presents a broad overview of transitivity in Japanese focusing on such lexical/morphological issues as verb alternations, agency, and lexical aspect as well as on syntactic/clausal level issues involving non-canonical constructions that deviate from the prototypical agent-subject constructions. In so doing, he illuminates major contributions from Japanese linguistics to existing theories of language typology and language universals and attempts to identify the characteristics of Japanese in the typological landscape. He also introduces important insights from native Japanese scholarship, which have unfortunately remained inaccessible to a wider international audience due to the language barrier. In **Chapter 2 “Non-canonical constructions in Japanese: A crosslinguistic perspective”** Shibatani and Pardeshi focus on non-canonical constructions (NCCs), which require two obligatory nominal arguments unlike canonical intransitive sentences, on the one hand, but which are coded either as NOM-NOM or DAT-NOM, unlike the canonical transitive coding of NOM-ACC, on the other. They offer a detailed semantic and syntactic account of Japanese NCCs in comparison with similar constructions in a wide range of languages, but especially those from South Asia. Unlike the prevailing views that NCCs are transitive constructions, Shibatani and Pardeshi, taking semantics more seriously than other works dealing with this topic, offer an alternative account holding that they are actually variants of double subject constructions containing two subjects, a large subject and a small subject, where the large subject sets a domain in which an intransitive predication about physio-psychological states and others obtain. Further, they offer both Japanese-internal and crosslinguistic evidence to support their claim that both large subject and small subject are indeed syntactic subjects. **Chapter 3 “Voice extension in passives and causatives”** by Ryuichi Washio overviews the analyses of voice-related constructions in Japanese that were offered by early as well as modern domestic grammarians. He focuses primarily on the characteristics of Japanese passives and highlights their relatedness to causatives in other languages. Based on this, he proposes that Japanese passives must have developed from a *transitive* construction, contrary to the majority view that they have developed from an *intransitive* construction. Washio's proposal concerning the historical development of

Japanese passives corroborates a crosslinguistic generalization he refers to as “Unidirectionality of Voice Extension”, viz. that the direction of causative (and other transitive constructions) leading to the development of passive constructions is crosslinguistically far more prevalent than passive constructions leading to the development of causative constructions. In **Chapter 4 “Causative constructions in Japanese and Korean”**, Sung-Yeo Chung and Masayoshi Shibatani examine central issues in the analysis of causative constructions in Japanese and Korean, providing a succinct overview of previous research from the 1970s to the present day and giving consideration to both language-internal and inter-linguistic patterns among the morphology, semantics, and syntax of causatives. Concretely, they take up issues such as productivity and constraints on the formation of causatives, the relationship between productive causative forms and lexical transitive verbs expressing causal meaning, and problems related to definitions of direct and indirect causation and argue that by paying close attention to meaning/function these issues can be resolved in an elegant way. To buttress their claim, they offer rigorous definitions of direct and indirect causation proposing an intermediate category called ‘sociative’ causation, which lies between the two poles of direct and indirect causation, and demonstrate how their functional characterization of causation helps in resolving formal issues such as case marking of the causee nominal and construal of adverbial modification and reflexive forms. In particular, their analysis of construal of reflexive form radically departs from the widely believed dichotomy between lexical causatives with mono-clausal deep structures, and productive causatives with bi-causal deep structures. In their new analysis, the interpretation of reflexive forms is explained in terms of the event structure associated with different types of causation.

The next two chapters are related to verbs’ lexical meaning and result entailments. **Chapter 5 “Entailed and intended results in Japanese and Burmese accomplishment verbs”** by Atsuhiko Kato discusses the nature of a peculiar phenomenon, first observed by Yoshihiko Ikegami for Japanese and by James Tai for Chinese, in which the attainment of resultant states implied by so-called accomplishment verbs is cancelled or suspended (for some speakers in certain pragmatic contexts), as in *Doa o aketa ga, akanakatta* lit. ‘(I) opened the door but it didn’t open.’ By critically reviewing previous literature, Kato sorts out the semantic and pragmatic factors that contribute to the weakening of result entailments in Japanese. He then moves on to comparison of Japanese with Burmese, where it is observed that Burmese speakers permit the cancellation construction freely and consistently. As a result, Kato proposes that in Burmese, the result events in accomplishment verbs are nothing but the speaker’s intended results, whereas in Japanese, they are lexical entailments which might be cancelled under such conditions as (i) an interpretation of incomplete realization of the result and (ii) defocusing of the result by adverbial elements. **Chapter 6 “Resultative constructions in Japanese from a typological perspective”** by Taro Kageyama and Li Shen probes how “resultative

constructions”, a long-standing issue of heated debate in the syntax and semantics of generative grammar and cognitive/usage-based linguistics, are activated in Japanese. After teasing apart genuine resultative predicates and spurious/pseudo resultatives, a set of semantic criteria based on the inferrability of a result state from the main verb’s lexical meaning is proposed as an alternative to the syntactic criterion based on the transitivity of main verbs that has been standardly held in the studies of English and other languages. The proposed semantic criteria serve to differentiate three classes of resultative phrases that are formulated hierarchically as an implicational universal: Type I (inherent resultatives, which are lexically entailed by main verbs) > Type II (semi-inherent resultatives, which are semantically implied by main verbs in conjunction with the entities in change > Type III (derived resultatives, which are pragmatically implicated in particular contexts). The authors show that this hierarchy accounts not only for the distribution of resultatives in individual languages but also for variable degrees of acceptability within a single language and across different languages. Specifically, the resultatives in Japanese are limited to Type I, whereas some other languages permit Type I and Type II, with English and Chinese being the most liberal in allowing all of the three types.

The next two chapters in Part I deal with verb-verb (V-V) complex predicates. **Chapter 7 “Verb-Verb compounding in Japanese and Turkish”** by Yuu Kuribayashi focuses on V-V compounding, a topic that has been extensively discussed in Japanese linguistics but has been little studied in Turkish linguistics. Kuribayashi argues that the insights from the studies on Japanese V-V compounding, especially the bipartition of lexical and syntactic compounds advocated by Taro Kageyama for Japanese helps to illuminate the classification of V-V compound verbs in Turkish as well. Specifically, by utilizing the diagnoses of particle insertion, passive suffix on V1 and V2, negative suffix on V1 and V2, personal suffix on V1, wide operator scope, and reduplication of V1, Kuribayashi observes that the productive V-V compound verbs in Turkish are identified as syntactic, while Japanese has both lexical and syntactic compound verbs. Kuribayashi’s discussion on Turkish V-V compounds is followed by **Chapter 8 “Ainu complex predicates with reference to Japanese”**, where Anna Bugaeva takes up the “V1 conjunction *wa* V2” complex verb construction in Ainu, an endangered language spoken in north Japan that is genetically and typologically unrelated to Japanese. Assuming that the “V1 conjunction *wa* V2” construction corresponds to the “V-*te* V” complex predicate construction in Japanese, Bugaeva exploits diagnostic tests comparable to those applied for Japanese V-*te* V complexes to see whether the Ainu construction makes up one predicate or two, leading to nine subtypes of the construction. By comparing Hokkaido Ainu with their Japanese V1-*te* V2 counterparts, she suggests that while language contact between Japanese and Hokkaido Ainu in the Meiji (1868–1912) and post-Meiji periods has played a significant role in the formation of complex predicates in Ainu, four different scenarios of development can be posited depending on a particular complex predicate subtype, namely, (i)

internal development within Ainu irrespective of contact with Japanese (*an/oka* EXIST and *isam* DISAPPEAR), (ii) boosting frequency of already existing complex predicates (*ek/arki* COME, *arpa/paye* GO and tentative *inkar* SEE, *inu* HEAR) due to contact with Japanese, (iii) calque on Japanese complex predicates (*kor-e* GIVE and *anu/ari* PUT) and (iv) formation by analogy to other V1 *wa* V2 complexes (*okere/okerpa* FINISH).

Part I concludes with three chapters centering on cognitive motivations of verbal constructions. In **Chapter 9 “Motion event descriptions in Japanese from typological perspectives”**, Yo Matsumoto surveys the ways of describing motion events, especially self-motion and caused motion, in Japanese with special reference to the typology of motion event descriptions proposed by Leonard Talmy, where the languages of the world are classified into two major types on the basis of the coding position of the “path” of a motion event: “verb-framed” languages and “satellite-framed” languages. In the former type the path is encoded in the main “verb”, while in the latter it is encoded in an element, called a “satellite”, that occurs in a position sister to the verb (root). In view of diverse ways of expressing paths which cannot be subsumed under Talmy’s notion of satellite, a revision is proposed to distinguish languages expressing a path in the main verb root (head Path coding) from those expressing it in other elements (head-external Path coding). Although Japanese, along with Spanish and French, is generally classified as a language in which Path is coded in the main verb, Matsumoto argues on the basis of empirical evidence from corpus-based and experimental studies that the standard assumption is not entirely correct as Japanese often expresses Path in positions other than main verbs. In **Chapter 10 “Deictic motion constructions in Japanese and Thai”**, Kiyoko Takahashi compares Japanese and Thai as regards “deictic motion constructions” involving COME (movement toward the speaker’s reference point) and GO (movement away from the speaker’s reference point), with a view to (i) presenting a comprehensive classification of deictic motion constructions in the two languages on the basis of their formal and functional properties and (ii) elucidating commonalities and differences between the uses of deictic motion verbs of the two languages. She points out that although the functions of deictic motion verbs in Japanese (*kuru* ‘come’ and *iku* ‘go’) and Thai (*maa* ‘come’ and *paj* ‘go’) are seemingly similar, the uses of the Japanese verbs are less diverse compared to the uses of their Thai counterparts. Using the framework of metaphors, she highlights the cognitive motivation underlying each construction. Finally, in **Chapter 11 “Event integration patterns in Sidaama and Japanese”**, Kazuhiro Kawachi examines how the multi-verb constructions in Sidaama, a Cushitic language spoken in Ethiopia, and Japanese express complex events in Leonard Talmy’s framework of lexicalization and event integration. Based on Talmy’s five event domains, viz. (i) motion (*The ball rolled in*), (ii) state change (*I blew out the candle*), (iii) realization (*The police hunted the fugitive down*), (iv) temporal contouring (*They talked on*), and (v) action correlating (*I sang along with him*), Kawachi shows that although Japanese and Sidaama exhibit a

fairly persistent verb-framed pattern in the three event domains of motion, state change, and realization, they both depart from this pattern in the domains of temporal contouring and action correlating. The reason for this deviation, he argues, is that the latter two domains need not follow the temporal order of “a co-event followed by an association function”. Kawachi further suggests the factors that make Japanese and Sidaama look similar despite their genealogical and geographical distance.

**PART II “NOMINAL CONSTRUCTIONS AND RELATED ISSUES”** deals with a broad range of topics involving nouns, noun phrases, and pronouns. **Chapter 12 “Nominalization in crosslinguistic perspective”** by Masayoshi Shibatani is a sequel to his chapter in the syntax volume of this handbook series. Shibatani defines nominalization as a metonymic process the products of which are like nouns by virtue of their association with an entity-concept denotation and possession of a referential function. Making a systematic distinction between lexical and grammatical nominalizations on the one hand, and between verbal-based and nominal-based nominalizations on the other, he offers a bold novel analysis of Japanese nominalizations claiming that the notion of nominalization is neither morphological nor syntactic, but functional. By careful analysis of various types of relative clauses (such as internally-headed relative clauses, headless relative clauses, and restrictive relative clauses) he argues that all of them are merely uses of nominalizations and have no reality as independent structures. He adduces support for his novel analysis from a large variety of typologically diverse languages. The next two chapters treat noun modification constructions in Japanese and other languages. **Chapter 13 “Clausal noun-modifying constructions”** by Yoshiko Matsumoto and Bernard Comrie discusses a construction termed “the clausal noun-modifying construction (NMC)”, in which a head noun is preceded by a clause that modifies it in a huge variety of semantic and pragmatic relations encompassing not only the standard “relative clause” relation but also appositive and miscellaneous adjunct relations – a phenomenon first pointed out by Hideo Teramura in the 1970s. Based on a detailed analysis of naturally-occurring NMCs in Japanese and a comparison of them with their English counterparts, they propose a binary typology of English-type languages, which would have distinct relative clauses with gaps and the possibility of syntactic constraints on extractability, versus Japanese-type languages, which would have a single general noun-modifying clause construction with no gap, and therefore no possibility of syntactic constraints on extraction (with a caveat that the parameter value “having syntactic constraints” unequivocally assigns a language to the English type, but the parameter value “lacking syntactic constraints” does not necessarily assign a language to the Japanese type). Comparing several languages, they conclude that among the languages that are claimed to have Japanese-type constructions, Japanese is least constrained (i.e. most liberal) in the range of the constructions, and that the recognition of general NMCs in Japanese can lead to a unified description of a range of phenomena that would otherwise remain scattered piecemeal.

Matsumoto and Comrie's chapter is followed by a case study of Swahili by Nobuko Yoneda in **Chapter 14 "Noun-modifying constructions in Swahili and Japanese"**. Drawing on the insights of Hideo Teramura's distinction of *uchi no kankei* 'inner relation' and *soto no kankei* 'outer relation', Yoneda presents a comprehensive description of two types of noun-modifying construction found in Swahili, one marked with the overt complementizer *amba* (the "amba construction") and the other without it (the "*amba*-less construction"). After summarizing characteristic properties of *amba* and *amba*-less constructions, she unravels an important difference between the two, viz. possible range of modification or possible relation between the head noun and the modifying clause. She argues that the distinction between inner and outer relations discussed in Japanese linguistics is crucially relevant to the distinction of *amba* and *amba*-less constructions. Specifically, Yoneda shows that the *amba*-less construction is mainly used in the inner relation and marginally in the appositive relation with certain restrictions but not in the causal relation, whereas the *amba* construction can represent not only the inner relation but also appositive and causal outer relations. As she points out, however, the range of outer relations expressible by the *amba* construction is far more restricted than that of Japanese noun-modifying constructions.

The remaining four chapters in Part II concern quantifiers, numerals, deictic pronouns, and interrogative pronouns. In **Chapter 15 "Quantifier float in Japanese and English"**, Ken-ichi Takami takes up quantifier float, a phenomenon that has been hotly discussed in the generative-syntactic literature on both Japanese and English but largely independently of each other. Takami begins by classifying Japanese quantifiers into three groups: (i) those which must be separated from their associated NPs, such as *minna* 'all' and *daremo* 'any(body)', (ii) those like *wazuka* 'a little' that must be in the same phrase as their associated NPs, and (iii) those which may be in the same phrase as their associated NPs or separated from their associated NPs, such as *subete* 'all', *sorezore* 'each', *hotondo* 'most', *takusan* 'many/much', *sukosi* 'some/a few/a little', and *san-nin* '3-CLF<sub>human</sub>'. The first type enjoys a highly independent status and the second type a low independent status while the independent status of the third type is in between (i) and (ii). As an alternative to the movement analysis of quantifiers in generative grammar, he proposes a functional analysis in which all three types of quantifiers are base-generated at their surface positions. Takami also develops a functional account of the well-known fact that in English only universal quantifiers can float, whereas in Japanese all quantifiers including numeral quantifiers can. According to Takami, in English, the floating quantifier is an appositive pronoun and therefore it represents the same referent as its associated NP, while in Japanese, the floating quantifier functions to "specify" or "restrict" the number or amount of the NP's referent. This difference explains why Japanese allows all types of quantifiers to float while the English quantifier float is restricted to universal quantifiers. **Chapter 16 "Measure nouns and numerals"** by

Akira Watanabe is a unique contribution that, couched in the framework of generative grammar, discusses a relatively unpopular topic associated with nouns for measuring time (e.g. *syuu* ‘week’), length and distance (e.g. *meetoru* ‘meter’), weight (e.g. *guramu* ‘gram’), and money (e.g. *en* ‘yen’) from a crosslinguistic perspective. Unlike ordinary lexical nouns, which require numerals to be followed by classifiers in counting their number as in *san-dai no kuruma* [three-CLF GEN car] ‘three cars’ vs. \**san kuruma* [three car], the measure nouns are directly combined with numerals without the mediation of classifiers, as in *san-meetoru* ‘three meters’ and *san-guramu* ‘three grams’. After clarifying their syntactic and semantic properties, which are often highly complex due to lexical suppletion, Watanabe observes that a crosslinguistically widespread phenomenon called “1-deletion”, which accounts for the absence of ‘one’ in front of the numeral *zyuu* ‘ten’ (cf. \**iti-zyuu* [one-ten], *ni-zyuu* [two-ten] ‘twenty’, *san-zyuu* [three-ten] ‘thirty’, etc.) as well as *hyaku* ‘hundred’ applies to certain uses of measure nouns as well, and develops a formal analysis postulating the feature [±augmented] that has a universal applicability. **Chapter 17 “Japanese spatial deixis in crosslinguistic perspective”** by Shingo Imai discusses the spatial deixis uses of three sets of Japanese demonstrative pronouns signaled by *ko-* (as in *kore* ‘this one’, *kono* ‘this’, *koko* ‘here’, *koo* ‘this way’), *so-* (as in *sore* ‘that one’, *sono* ‘that’, *soko* ‘there’, *soo* ‘that way’), and *a-* (as in *are* ‘that one over there’, *ano* ‘that N over there’, *asoko* ‘over there’, and *aa* ‘that way’) and compares them with their functional analogues in other languages of the world. Following a critical review of previous research on Japanese demonstratives with spatial deictic functions, he examines several semantic features that he calls “parameters” which characterize and determine the choice of demonstrative pronouns, demonstrative adnominals, and demonstrative adverbs used in particular contexts in Japanese and in other languages, and considers how some parameters win out over other parameters when two or more parameters are involved in choosing an appropriate demonstrative.

In **Chapter 18 “‘Who’, ‘what’, and ‘which’ in Japanese and Chinese”**, Hideki Kimura offers interesting observations on the meanings and uses of interrogative words in Japanese (*dare* ‘who’, *NANI* ‘what’, *dore* ‘which (of three or more)’, and *dotti* ‘which (of two)’) and in Chinese (*shei* ‘who’, *shenme* ‘what’, and *neige* ‘which’). After observing that these interrogatives have three functions, i.e. “description seeking function”, “specification seeking function”, and “indication seeking function”, Kimura points out similarities between the two languages (for example, *dare* and *shei* call for a description of the attributes of an individual person and *NANI* and *shenme* call for a description of the attributes of various “entities”) as well as differences (for example, *dare* and *NANI* are appropriate only when the number of possible choices is three or more while Chinese *shei* and *shenme* are compatible with binary choices). Kimura concludes that the functional distribution of interrogatives in the two languages reflects differences in the level of the domains with which the targets of inquiry are affiliated and of the way the targets are stored within those domains. In **Chapter 19 “Inalienable possession in Japanese, English, and Warrongo”**,



Tasaku Tsunoda discusses the morphosyntactic reflections of the semantic notion of the relation of inalienable possession in Japanese with reference to English and Warrongo, an Australian aboriginal language. After presenting the “possession cline”, a hierarchical representation of various subconcepts of alienable and inalienable possession on a continuum as in “Body part (e.g. names of body parts and excreta) > Inherent attribute (e.g. propensity, weight, height, size, shape) > Clothing (e.g. clothes, spectacles, shoes) > Kin (e.g. parents, children, siblings, spouse) > Pet animal (e.g. pet or domestic animals) > Product (e.g. a work that a craftsman made) > Other possessee (incidental belongings)”, Tsunoda tests its validity with syntactic phenomena in Japanese such as the noun modification construction of the form “N + *no* (genitive) + N”, honorific constructions, possessor ascension constructions, and verbs denoting possession, and extends it to relevant phenomena in English and Warrongo.

**PART III “ASPECT, MODALITY, AND PREDICATION”** covers miscellaneous topics in semantics and pragmatics. **Chapter 20 “Continuous aspects in Japanese, Newar and Meche”** by Kazuyuki Kiryu compares the functions of aspectual markers in two Tibeto-Burman languages, *-a cwane* in Newar and *-dæŋ* in Meche, with that of *-te iru* in Japanese – all of them originating from verbs of existence. A critical review of previous studies discussing the multiple functions of *-te iru*, such as progressive, resultative, perfects, simple state, repetition, and habitual, leads Kiryu to assume that they boil down to the core meaning of continuous aspect. He then compares *-te iru* with their counterparts in Newar and Meche, arguing that the notion of continuous aspect can account for the common polysemy of the three forms denoting progressive (ongoing process), resultative, iterative, and (continuous) perfect. A difference shows up, however, in the simple state reading, which is available only to Japanese *-te iru*. Kiryu attempts to account for this difference by a semantic map that shows a network of semantic links among polysemous meanings of the three aspectual markers.

The next two chapters deal with modality. **Chapter 21 “Modality in Japanese from a cross-linguistic perspective”** by Narrog Heiko presents a comprehensive review of the studies on Japanese modality or *chinjutsu* in the traditional *Kokugogaku* and more recent *Nihogogaku* disciplines and contrasts them with the studies of modality in modern general linguistics. Referring to the former as an ‘inside’ perspective and the latter as an ‘outside’ perspective, he points out that the two perspectives differ in terms of their focal points and there is not much overlap between them. In the ‘inside’ perspective, modality has been understood as the expression of the speaker’s stance and as the element concluding a sentence (or an utterance). In contrast, in the ‘outside’ or Western perspective, modality has been defined in terms of factual status and treated as a grammatical category on a par with tense or aspect. Narrog points out that both approaches are necessary for a holistic understanding of modality: the inside approach suits well for description of categories on the illocutionary level like sentence-final particles, while the outside approach suits

better for description of core categories of modality such as possibilities and necessities as well as for the purposes of comparative or crosslinguistic research. Narrog's general description of Japanese modality is followed by Noritaka Fukushima's discussion **"Modality in Japanese and Spanish" (Chapter 22)**. Fukushima concentrates on some specific cases of Spanish-Japanese comparison in two directions: contribution from Spanish to Japanese and contribution from Japanese to Spanish. As cases of contribution of insights from Spanish to understanding of modality in Japanese, Fukushima discusses three phenomena: (i) multiple embedding, (ii) analysis of *koto* and *no* clauses, and (iii) polysemy of certain auxiliary verbs in Modern Japanese as well as in Classical Japanese. Conversely, Fukushima demonstrates that Fujio Minami's classification of subordinate clauses helps to illuminate the characterization of the subjunctive and its uses in Spanish.

In **Chapter 23 "Internal state predicates in Japanese and Thai"**, Satoshi Uehara and Kingarn Thepkanjana focus on the peculiar behavior of what they call "internal state predicates", such as 'be glad' and 'feel cold', in Japanese and Thai. In Japanese, these predicates, when put in the simple present tense, impose a strict restriction on their subject that it should be first person, while such a person restriction on the subject is absent in Thai. Uehara and Thepkanjana argue that the "person restriction", which has long been noted in Japanese linguistics, is not really person-based but should instead be reformulated as the "experiencer-conceptualizer identity constraint", which states that the experiencer of the situation/event must be identical with the conceptualizer of that situation/event. They claim that this reformulation covers a wider explanatory ground and can even account for phenomena such as the use of internal state predicates in interrogative contexts, and also usages outside "reportive" contexts, including those where no interlocutor is present. They conclude that the difference between Japanese and Thai internal state predicates lies in the patterns of lexicalization. **Chapter 24 "Property predication in Koryak viewed from Japanese"** by Megumi Kurebito is an excellent case study of showing how a notion espoused in Japanese linguistics contributes to resolving a puzzling phenomenon in a different language. By drawing upon the semantic distinction between "event predication" and "property predication" developed in studies on Japanese grammar, Kurebito demonstrates that the notion of property predication is crucially relevant to revealing the nature of a recalcitrant problem involving the KU to N conversion in the adjectival morphology of Koryak, a Paleo-Asiatic language spoken in northern part of the Kamchatka peninsula and on the mainland opposite (north-east Siberia).

Part III concludes with **Chapter 25 "Subordination and insubordination in Japanese from a crosslinguistic perspective"** by Kaoru Horie, who deals with an important area of Japanese grammar, namely, subordination. Demonstrating the formal and functional affinity of the subordinate clauses with main clauses and comparing it with other languages such as English, Korean and Chinese, Horie

argues that Japanese is crosslinguistically a rather unique language wherein structurally and functionally diverse subordinate clauses have fluid boundaries with main clauses both clause internally and clause externally, and therefore discreteness need not be a defining (or necessary) feature of subordination. Horie also discusses the use of a subordinate clause as a main clause, i.e. “insubordination”, which is extensively observed in spoken Japanese.

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## **I Verbal constructions and related issues**



Prashant Pardeshi

# 1 Transitivity in Japanese from a typological perspective

## 1 Introduction

The notion of transitivity is a key concept in the description and analysis of the structure of major types of clauses containing a predicate and a variable number of arguments that the predicate in question hosts. As Hopper and Thompson (1980) rightly point out, the notion of transitivity lies at the explanatory core of most grammatical processes perhaps in all languages of the world. In Japanese, in fact, an enormous amount of research is available on various issues related to transitivity, in particular the phenomena of transitive-intransitive verb alternations and valency change. Concerning these phenomena, previous studies are broadly divided between two approaches. One is the descriptive approach that has a long tradition in the domestic Japanese-language studies called *Kokugogaku* or *Nihongogaku*. This approach is represented by the articles collected in Suga and Hayatsu (eds.) (1995) and the references cited there. The other is a more recent, theoretical and crosslinguistic approach based on modern theories of grammar and typology. This approach is exemplified by the articles in Kageyama and Jacobsen (eds.) (2016) that discuss valency alternations from the multidisciplinary perspectives of morphology, lexical semantics, syntax, history, dialects, and acquisition. Maruta and Suga (eds.) (2000), contrasting the verb alternations in Japanese and English, can be viewed as a synthesis of the descriptive and theoretical approaches.

In this chapter, drawing on insights from previous works, I will present a broad survey of a few selected topics pertaining to transitivity in Japanese from a functional-typological perspective. Although the issues related to transitivity are intertwined and cannot always be clearly separated, I will divide them into two broad categories for ease of exposition: (i) transitivity-related phenomena at the lexical or morphological level, with particular focus on transitive-intransitive verb alternations, and (ii) transitivity-related phenomena at the clausal or syntactic level with particular reference to issues involving the agency and other semantic properties of subject arguments in sentence structure. Wherever possible, an attempt is made to locate Japanese in a larger typological picture. I will also try to introduce important insights from native Japanese scholarship, which unfortunately remains inaccessible to a wider audience due to the language barrier. Further, I will restrict the scope of this survey to basic clause types, leaving discussion on marked clause types that are derived syntactically, such as passive and causative, to Washio (this volume).

The chapter is organized as follows. Section 2 presents a brief summary of characterizations of the notion of transitivity, and Section 3 introduces two central

concepts, agency and lexical aspect, that are closely tied in with transitivity. Following this, Sections 4 and 5 respectively address the transitivity at the lexical level and the transitivity at the syntactic level from a functional-typological perspective. Section 6 provides a brief summary and future prospects.

## 2 Characterizations of the notion of transitivity

Broadly speaking, there are two approaches to the characterization of the notion of transitivity: (i) the polar approach and (ii) the scalar approach. In the polar approach, transitivity is viewed as a dichotomous notion based on a single parameter, namely presence vs. absence of a direct object: Verbs that take an accusative-marked direct object are considered transitive, while those that lack one are considered intransitive (Crystal 1985: 316; Quirk et al. 1985: 53; Dixon and Aikhenvald 2000: 2–5; among others). Such a characterization can be referred to as “syntactic” transitivity.

The polar characterization of transitivity is closely related to the notion of valence, which is defined as the number of arguments the predicate of a clause can potentially host. Dixon and Aikhenvald (2000: 3) makes a four-way distinction of major clause types: (i) intransitive (one core argument S)<sup>1</sup>, (ii) transitive (two core arguments, A and O), (iii) extended intransitive (one core argument S plus an additional argument E as an extension to the core), (iv) extended transitive (two core arguments, A and O, plus an additional argument E as an extension to the core). Dixon and Aikhenvald argues that “transitivity” and “valency” can be usefully distinguished. Transitivity refers to two main clause types: intransitive clause (with one core argument S) and transitive clause (with A and O). Each of these have “plain” and “extended” subtypes, depending on whether or not E is also in the core. Valency, on the other hand, refers to the number of core arguments. Thus, plain intransitive clauses are monovalent (S), plain transitive clauses are bivalent (A and O), extended intransitive clauses are also bivalent (S and E) while extended transitive clauses are trivalent (A, O, and E).

In the scalar approach, on the other hand, transitivity is considered a matter of degree: A clause can be more or less transitive depending on the extent to which it conforms to the transitive prototype characterized in terms of a set of parameters, one of which is the presence or absence of a direct object (see Lakoff 1977; Hopper and Thompson 1980; Jacobsen 1985, 1992; Tsunoda 1985, 1991; Lazard 2003; Malchukov

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<sup>1</sup> The abbreviation S stands for the single core argument of intransitive verbs, while A and O stand for two core arguments of transitive verbs. Some scholars use the label P instead of O. It should be noted that the concepts of S, A, on the one hand and O/P on the other are different both from grammatical relations viz. “subject” and “object”, and also from the semantic roles viz. “agent” and “patient”. Extended subtypes of intransitive as well as transitive clauses have an additional argument, abbreviated as E, which is considered to be the extension to the core.



2006; Næss 2007, *inter alia*). Such a conception of transitivity can be referred to as “semantic” transitivity. In their seminal paper, Hopper and Thompson (1980) stipulate that a set of ten parameters, shown in Table 1, serves as a universal basis to measure the degrees of transitivity in a given clause.

**Table 1:** Hopper and Thompson’s (1980) transitive prototype

	Transitivity	
	High	Low
A. Participants	2 or more participants, A and O <sup>2</sup>	1 participant
B. Kinesis	Action	Non-action
C. Aspect	Telic	Atelic
D. Punctuality	Punctual	Non-punctual
E. Volitionality	Volitional	Non-volitional
F. Affirmation	Affirmative	Negative
G. Mode	Realis	Irrealis
H. Agency	A high in potency	A low in potency
I. Affectedness of O	O totally affected	O not affected
J. Individuation of O	O highly individuated	O non-individuated

According to Hopper and Thompson (1980), the parameters can be manifested either morphosyntactically or semantically. They argue that these parameters co-vary with one another in several languages, and that clauses can be ranked on the transitivity scale in terms of the combinations of these ten parameters. A clause that has more high-transitivity features is considered to be more transitive than a clause that has fewer of them.

Semantic transitivity can be conceived of as a scale or continuum with prototypical transitive events involving a volitional agent (A) bringing about a change in the patient (O) at one end and canonical spontaneous events involving a patient perceived to be undergoing a change on its own at the opposite end. Based on Japanese data, Jacobsen (1992: 109) characterizes the prototype of “transitive” events and that of “spontaneous” events as follows.

- (1) The transitive prototype
  - i. There are two entities involved in the event.
  - ii. One of the entities (the agent) acts intentionally.
  - iii. The other entity (the semantic object) undergoes a change.
  - iv. The change occurs in real time.

<sup>2</sup> Hopper and Thomson (1980) follow Dixon (1979) in using “A” for Agent and “O” for Object to refer to the two participants in a biactant clause.

- (2) The spontaneous prototype
  - i. There is one entity involved in the event—the semantic object.
  - ii. The semantic object undergoes a change.
  - iii. The change occurs in real time.

Clauses with varying degrees of transitivity can be placed between these two poles of the transitivity spectrum. Clauses on the higher end (the transitive prototype end) would generally be syntactically transitive, while those on the lower end (the spontaneous prototype end) would be syntactically intransitive.

At the lexical level focusing on particular verbs, the polar characterization of transitivity will be useful because the verbs registered in the lexicon are flagged either as transitive or as intransitive in terms of their valency. On the other hand, the scalar characterization of semantic transitivity, which takes into account a cluster of syntactic and semantic properties associated with a particular syntactic configuration of a clause in a given language, is effective at the clausal level as a global notion measuring the degrees of transitivity of a given clause/sentence. By adopting the prototype approach, canonical and non-canonical transitive clauses are distinguished on the basis of their degrees of transitivity measured with respect to some multi-factorial yardstick like the transitive prototype proposed by Hopper and Thompson (1980) or the semantic framework proposed by Lazard (2003), which presents a yardstick for crosslinguistic comparison called the major biactant or (two-actant, X and Y) construction (MBC) that encodes a prototypical action (PrA) involving two participants, viz. an agent mapped on an actant X and a patient mapped on an actant Y. Referring to the scalar notion as “semantic” transitivity and the polar notion as “constructional transitivity”, Lazard (2015: 114–119) argues that both the scalar and the polar sense of the term “transitivity” are useful and legitimate and emphasizes that these two senses should be clearly distinguished.

With this background let us move on to concrete issues pertaining to transitivity in Japanese. We will attempt to pinpoint where Japanese can contribute to general and typological theories of transitivity and verb alternations.

### 3 Agency and lexical aspect as principal factors affecting transitivity

Out of the ten parameters proposed by Hopper and Thompson (1980) [listed in Table 1], this section will focus on two parameters, viz. agency and lexical aspect, and show that they play an important role in Japanese just as they do in other languages.

### 3.1 Agency and transitivity: Two types of intransitive verbs

The celebrated distinction between two types of intransitive verbs, viz. “unaccusative” verbs and “unergative” verbs, is credited to Perlmutter (1978), a proponent of relational grammar, although presumably the same phenomenon of “split intransitivity” has long been reported for active-stative languages in various parts of the world. Perlmutter’s unaccusative hypothesis is motivated syntactically: The subjects of unaccusative verbs behave in the same way as the direct object of transitive verbs in basic clause structure whereas those of unergative verbs display the same syntactic behavior as the subjects of transitive verbs. Put in semantic terms, the subjects of unaccusative verbs (called “internal arguments” in generative-oriented research) typically represent patients or themes, and those of unergative verbs (“external arguments”) agents and experiencers. They also differ in terms of the agency of their subject.

Long before Perlmutter, the importance of the subject’s semantic property in verb classification was noted by Japanese grammarian Haruniwa Moto’ori in his treatise *Kotoba no kayoiji* (Pathways of words) published in 1828, where a distinction was made between two verb classes: *onozukara shikaru* (to become spontaneously/naturally as a matter of course) and *mizukara shikasuru* (to do/make by oneself volitionally). Although Moto’ori may sometimes be regarded as a precursor of the unaccusative hypothesis, this is not quite right because Perlmutter was primarily interested in the syntactic distinction of unaccusatives and unergatives whereas Moto’ori’s distinction is purely semantic and has no correlation with the verb’s valency (for example, Moto’ori includes not only intransitive verbs but also transitive verbs such as *motu* ‘to hold’ and *oku* ‘to put’ under the rubric of *mizukara shikasuru*).

Refining Moto’ori’s dichotomy, Mikami (1972) proposes a distinction of *shodōshi* (non-active verbs) vs. *nōdōshi* (active verbs) on the basis of a syntactic criterion, namely, susceptibility to passive formation. According to Mikami, while intransitive *nōdōshi* (with agent or experiencer subjects) are susceptible to indirect passive, as in *Sonna tokoro de ne-rare-te wa komaru* lit. ‘I’m adversely affected by your sleeping in such a place’, intransitive *shodōshi* (with theme or patient subjects) reject it as shown by the ungrammaticality of *\*Watasi wa kare ni ni-rare-te komaru* lit. ‘I’m adversely affected by his resembling me’. Susceptibility to imperative and potential constructions also serves to make the distinction. See Jacobsen (1992: Ch. 4) for related discussion on the semantics of the two types of verbs.

The strong claim of Perlmutter’s (1978) unaccusative hypothesis is that the unaccusative/unergative distinction is reflected directly in syntactic structure (or a verb’s argument structure). Viewed from a generative grammar perspective, the subjects of unaccusative verbs are specified as “internal arguments” in the verb’s argument structure on a par with the direct objects of transitive verbs and are generated close to the main verb in the object position of a clause, while those of unergative verbs are specified as “external arguments” on a par with the subjects of transitive verbs and are generated high up in the subject position of a tree diagram.

**Table 2:** Basic argument structures

	<b>Agent (external argument)</b>	<b>Theme/patient (internal argument)</b>
Transitive verbs	subject	object
Unergative verbs	subject	—
Unaccusative verbs	—	subject

In terms of the degrees of transitivity, we can assume that transitive verbs have the highest transitivity, unaccusative verbs have the lowest transitivity, and unergative verbs come in between, as shown below.

While the unaccusative-unergative distinction was initially motivated in languages that manifest it formally in morphosyntax, Kageyama (1993) and Kishimoto (1996) adduce robust evidence that the distinction is firmly rooted in Japanese grammar, particularly in the realm of verb-based word formation such as V-V compounding and deverbal compounding. In particular, Kageyama shows that when two verbs are morphologically combined into a compound verb, a verb that has an external argument, be it transitive or intransitive, must be combined with another verb that also has an external argument, be it transitive or intransitive; an unaccusative verb, on the other hand, can go only with another unaccusative verb. This combinatory restriction, called the Transitivity Harmony Principle (Kageyama 1993), permits combinations in (3) but rules out combinations in (4).

- (3) a. Transitive + Transitive  
*osi-akeru* [push(tr.)-open(tr.)] ‘push open’
- b. Unergative + Transitive  
*(me o) naki-harasu* [cry(unerg.)-make.swollen(tr.)] ‘cry (one’s eyes) out’
- (4) a. Transitive + Unaccusative  
 \**osi-aku* [push(tr.)-open(unacc.)] ‘push something open’
- b. Unergative + Unaccusative  
 \**naki-hareru* [cry(unerg.)-become.swollen(unacc.)]

The Transitivity Harmony Principle thus lends support to the universal feasibility of the unaccusative hypothesis.

In the framework of generative grammar, Burzio (1986) makes an even stronger claim that unergative verbs, though intransitive, have the potential ability to assign an accusative case to an object phrase if there is one (more precisely, “All and only the verbs that can assign a  $\theta$ -role to the subject (i.e. external argument or agent/experiencer) can assign accusative case to an object”: Burzio’s generalization). A

well-known manifestation of Burzio's generalization is found in the intransitive-based resultative constructions in English. Unergative verbs like *laugh*, though intransitive, can take a “fake” object in the accusative as in *The audience laughed the speaker down*, while unaccusative verbs like *appear* cannot, as shown by the ungrammaticality of *\*A tiger appeared the villagers away* (meaning ‘A tiger appeared, so the villagers ran away’). An interesting realization of Burzio's generalization in Japanese was discovered independently by several researchers around 1990 (Dubinsky 1989; Miyagawa 1989; Tsujimura 1990; Kageyama 1991). This concerns the availability of the accusative marker on the VN (verbal noun) in the VN-*suru* light verb construction.

(5) a. Unergative VN

*Titi wa mai-asa sanpo o suru.*  
 father TOP every-morning stroll ACC do  
 ‘Father take a stroll every morning.’

b. Unaccusative VN

*\*Sakuban syatyoo ga sikyo o sita.*  
 last.night company.president NOM pass.away ACC did  
 ‘The president of the company passed away last night.’

In this construction, the light verb *suru* only carries tense and does not have the capacity to assign accusative marking. (5a) and (5b) contrast markedly in the availability of the accusative marker on the unergative VN *sanpo* in the former and the unavailability of accusative marker on the unaccusative VN *sikyo* ‘pass.away’ in the latter. Kageyama (1991) explains this disparity by assuming that the unergative *sanpo* ‘stroll’ executes its case-assigning ability to itself (reflexive case-assignment), while the unaccusative *sikyo* ‘pass.away’ does not have the case in the first place.

The observations in this section suggest that of the two types of intransitives, unergative verbs pattern with transitive verbs and have a higher degree of transitivity than unaccusative verbs.

### 3.2 Lexical aspect and transitivity

Besides the subject's agency, lexical aspect is another major factor that strongly influences the transitivity of a verb. Stative verbs, whose subjects are themes or patients (internal arguments), are lower in transitivity than action verbs, whose subjects are volitional agents (external arguments).

Kindaichi (1950) is regarded as the seminal work on the lexical aspect of Japanese verbs. He classified Japanese verbs into four groups, depending on their compatibility with the aspectual auxiliary *-te iru* [Gerundive + be] and the semantic interpretation of the whole construction.

## (6) Kindaichi's (1950) verb classification

## a. Stative verbs

Verbs that are incompatible with the *-te iru* form (e.g. *dekiru* 'be able to do X', *aru* 'to be')

## b. Continuative verbs

Verbs that express a progressive meaning in their *-te iru* form (e.g. *oyogu* 'to swim', *hasiru* 'to run')

## c. Instantaneous verbs

Verbs that express a perfect meaning (a state resulting from an event) in their *-te iru* form (e.g. *kowareru* 'to break', *toku* 'arrive', *shiru* 'learn, get to know')

## d. Type 4 verbs

Verbs that must be obligatorily used in their *-te iru* form in closing a sentence (or in the resultative *-ta* form in prenominal modification) and express stative meaning in these forms (e.g. *sugure-te iru* 'be outstanding', *sobie-te iru* 'tower').

(6b) and (6c) are distinguished semantically in that the former represent being engaged in an action or situation that continues over a certain duration of time (*aru jōtai ni aru*) while the latter represent taking on a certain state instantaneously (*aru jōtai o obiru*). The bare verbs in (6a) and the Type 4 verbs in (6d) are lumped together under the rubric of "stativity" because the situations they describe have no specific end in time. Kindaichi's classification has been revised and refined in subsequent works by Fujii (1966), Takahashi (1969), Yoshikawa (1973), and Okuda (1978), among others.

Kindaichi's four-way taxonomy has much in common with Vendler's (1957) well-known distinction of four aspectual classes – States, Activities, Achievements, and Accomplishments – which laid the foundation of current research in event semantics. They are, however, not identical in their motivation because Kindaichi was interested in the classification of verbs at the lexical level as is evident from the title of his paper ('A classification of Japanese verbs') whereas Vendler was concerned with the temporal/aspectual properties of a clause (or a verb phrase) at the syntactic level. Thus, in discussing the verb phrase *push a cart*, Vendler rightly observes that *push a cart* is an activity that is compatible with durative time adverbials like *for 30 minutes* but addition of a goal phrase as in *push a cart to the market* changes it to an accomplishment that is consonant with time-delimiting adverbials like *in 30 minutes*.

Kindaichi (1950) points out an interesting correlation between the transitivity and the meaning of a verb in its *-te iru* form. In lexical pairs of intransitive and

transitive verbs, such as *aku* ‘open (intr.)’/*akeru* ‘open (tr.)’ and *oreru* ‘break (intr.)’/*oru* ‘break (tr.)’, the intransitive verb tends to have a perfect meaning with *-te iru* (e.g. *ai-te iru* ‘is (already) open’, *ore-te iru* ‘is (already) broken’), while its transitive counterpart tends to have a progressive meaning with *-te iru* (e.g. *ake-te iru* ‘is opening something’, *ot-te iru* ‘is breaking off something’). While Kindaichi points out this significant correlation between transitivity and aspect of a verb, he offered no principled explanation for it. Okuda (1978) offers an explanation in terms of his proposal to distinguish verbs into two classes, viz. those expressing an event as an activity of the agentive subject and those expressing an event as bringing about a change in the patientive subject. From this classification, it naturally follows that the former correlate with the progressive meaning, while the latter correlate with the perfect meaning in their *-te iru* form. This behavior of Japanese verbs vis-a-vis aspect is very much in line with the crosslinguistic correlation pointed out by Comrie (1981) between progressive meaning and agent-orientation, on the one hand, and perfect meaning and patient-orientation, on the other.

Then, what meaning does *-te iru* itself have? Jacobsen (1992: Ch. 6) proposes that *-te iru* has a unified meaning denoting “a state of affairs that is homogeneous and unchanging over a given interval of time”. The predicates that are not lexically compatible with this meaning of *-te iru* (such as Kindaichi’s instantaneous verbs) involve an achievement component, which by definition cannot hold over every subinterval of a given interval and therefore must hold true for some interval or instant outside of the interval of time associated with *-te iru*. Whether this achievement is prior or posterior to the *-te iru* interval depends on the presence or absence of an activity associated with the achievement in question. If activity is present, and if it is exploited to create a progressive interpretation, the achievement will necessarily take place after the progressive *-te iru* interval. This explains the progressive reading of *-te iru* in accomplishment events such as *Kare wa (ima) hon o kaite iru* ‘He is writing a book (now)’. If activity is absent, there is no room for the progressive interpretation and therefore the only possible interpretation would be that the achievement occurs before the *-te iru* interval. This accounts for the perfect (or more precisely “experiential perfect”) reading of *Kare wa (zyuunen mae ni) hon o kaite iru* ‘He wrote a book (ten years ago) and this past achievement has current relevance.’

## 4 Transitivity alternations in paired verbs

This section addresses the central issue of transitivity in Japanese, viz. transitive-intransitive verb alternations called “transitivity alternations” or “causative alternations”, where one and the same verb (or more precisely, the same verb root) participates in both transitive and intransitive sentences that share a core notion of change

of state, as in *He broke the cup* and *The cup broke* or change of location, as in *He rolled the ball down the hill* and *The ball rolled down the hill*. This kind of alternation has been actively debated both in individual languages (see, for example, Levin and Rappaport Hovav (1995) for English, Jacobsen (1992) and Kageyama (1996) for Japanese, Schäfer (2008) for German, Hook (1996) for Hindi, etc.) and across languages (e.g. Guerssel et al. 1985; Haspelmath 1993; Nicholas et al. 2004; Comrie 2006; Koontz-Garboden 2009; Horvath and Siloni 2011, etc.).

Previous studies show that languages can be broadly divided into three groups, depending on how the alternations are achieved. In languages like English and Chinese, one and the same verb form is employed in both transitive (causative) and intransitive (noncausative) meanings; in languages like French and Italian, a reflexive pronoun is added to a transitive verb to make an intransitive sentence; and in languages like Japanese, and Korean, affixes are added to common verb roots. Japanese thus has the general strategy of distinguishing the transitive and intransitive forms of a single verb morphologically by changing the suffixes adjoined to its root. For example, *war-* is the verb root denoting the notion of a transitive verb ‘cause to be broken’, as in *Kare ga koppu o war-u* ‘He breaks the cup’, and it changes to *war-e-* to function as an intransitive verb, as in *Koppu ga war-e-ru* ‘The cup breaks’ (*-u* and *-ru* after *war-* and *war-e-* are inflectional endings that do not concern us here).

Surveying previous literature, this section will discuss the characteristics of Japanese transitivity alternations and clarify how they can contribute to settling some of the issues that are hotly debated in theoretical and typological studies, with particular focus on the following three:

- (A) The inventory of alternation types  
What kinds of transitivity alternations are available in language?
- (B) The direction of derivation  
Are the alternations fixed in one direction (for example, only from transitive to intransitive) or flexible allowing two or more directions?
- (C) The status of agent arguments of intransitive variants  
Are there (implicit or explicit) agent arguments in the syntactic or semantic structures of intransitive variants?

The issue in (A) has to do with the kinds of transitivity alternations available in a particular language as well as in human language. It will be shown that Japanese has a rich inventory of alternations including “intransitivization”, “transitivization”, and “polarization”. Concerning the issue in (B), many previous theories assume that the alternation is unidirectional, viz. an intransitive variant is derived from a transitive variant (“anticausativization”). Japanese data will lead us to reject this hypothesis. Concerning the issue in (C), previous studies argue that the agent argument in a transitive variant is not available/implicit in the intransitive variant. Again, Japanese data cast serious doubt on this claim, showing that two types of intransitive variants



must be postulated, one with, and the other without an agent argument in semantic structure.

## 4.1 Paired verbs (*yūsui dōshi*) vs. unpaired verbs (*mitsui dōshi*)

Having observed the relevance of agency and lexical aspect to transitivity, we are in a position to tackle the phenomena involving transitive-intransitive verb alternations. Like Hindi, but unlike English, Japanese abounds with ‘lexical’ pairs of transitive and intransitive verbs that share a common verb root but differ in the transitivity or intransitivity suffix attached to it, as in [*sim-e*]-*ru* ([shut<sub>ROOT</sub>-suffix]-PRS) ‘shut (tr.)’ vs. [*sim-ar*]-*u* ([shut<sub>ROOT</sub>-suffix]-PRS) ‘shut (intr.)’ and [*kow-as*]-*u* ([destroy<sub>ROOT</sub>-suffix]-PRS) ‘destroy’ vs. [*kow-are*]-*ru* ([destroy<sub>ROOT</sub>-suffix]-PRS) ‘be destroyed’. While the morphological patterns are divergent, such paired verbs basically center around the causative-noncausative alternations. Jacobsen (1992: 258–269) gives a list of 355 lexical pairs classified on the basis of transitivity and intransitivity suffixes into 16 sub-groups, and Matsumoto (2016) presents a revised list. Recently, Narrog et al. (2015) have compiled a more comprehensive list comprising 452 lexical pairs, where 18 pairs of intransitive verbs (e.g. *okiru* ‘to happen’ (intr.) / *okoru* ‘to happen’ (intr.)) and 19 transitive verb pairs (e.g. *koeru* ‘to cross’ (tr.) / *kosu* ‘to cross’ (tr.)) are also included. These intransitive-intransitive or transitive-transitive pairs are not discussed here because they can be regarded as historical remnants of irregular morphological variants rather than systematic alternations.

Table 3 gives three major types of verb alternation that are classified according to the morphological markedness, viz. which of transitive and intransitive roots is morphologically unmarked (basic) and which is marked with a transitivity-changing suffix. The suffixes exemplified here are only representative ones and the combinations of suffixes and verb roots are lexically fixed with no productivity in the synchronic grammar of Japanese; most patterns were already established in Old Japanese (Narrog 2016).

**Table 3:** Major patterns of verb alternations

Intransitive basic; transitive marked	<i>tat(u)</i> ‘stand <sub>IN</sub> , be built’ / <i>tat-e(ru)</i> ‘stand <sub>TR</sub> ’ <i>ugok(u)</i> ‘move <sub>IN</sub> ’ / <i>ugok-as(u)</i> ‘move <sub>TR</sub> ’ <i>oki(ru)</i> ‘wake up <sub>IN</sub> ’ / <i>ok-as(u)</i> ‘wake up <sub>TR</sub> ’ <i>aw(u)</i> ‘meet, match’ / <i>aw-ase(ru)</i> ‘make meet, put together’
Transitive basic; intransitive marked	<i>kir(u)</i> ‘cut’ / <i>kir-e(ru)</i> ‘get cut’ <i>sas(u)</i> ‘stick’ / <i>sas-ar(u)</i> ‘get stuck’ <i>um(u)</i> ‘give birth to’ / <i>um-are(ru)</i> ‘be born’
Both transitive and intransitive marked	<i>arawa-re(ru)</i> ‘appear’ / <i>arawa-s(u)</i> ‘show’ <i>ag-ar(u)</i> ‘go up’ / <i>ag-e(ru)</i> ‘send up’ <i>kae-r(u)</i> ‘go home’ / <i>kae-s(u)</i> ‘let go home’ <i>atatam-ar(u)</i> ‘warm up <sub>IN</sub> ’ / <i>atatam-e(ru)</i> ‘warm up <sub>TR</sub> ’

## 4.2 Criteria for recognition of a lexical pair of intransitive and transitive verbs

Suga (1986), and Hayatsu (1987), among others, employ three criterion to identify a lexical pair of intransitive and transitive verbs: (i) morphological relatedness, (ii) semantic relatedness (the intransitive verb expresses a change of state which is shared by the corresponding transitive verb except that the change of state expressed by the intransitive verb is spontaneous while that expressed by the corresponding transitive verb is brought about by external agency), and (iii) syntactic relatedness (the subject of the intransitive verb is the direct object of the corresponding transitive verb). Only lexical intransitive and transitive verbs that satisfy all these three criteria, such as *magaru* ‘bend (intr.): *mageru* ‘bend (tr.), *taoreru* ‘fall (intr.): *taosu* ‘bring down (tr.)’, are treated as “paired verbs” (*yūtsui dōshi*), which are divided into “paired transitives” (*yūtsui tadōshi* or transitive verbs that are paired with intransitive counterparts) or “paired intransitives” (*yūtsui jidōshi* or intransitive verbs that are paired with transitive counterparts). A pair of semantically as well as syntactically related intransitive and transitive verbs such as *sinu* ‘die’ vs. *korosu* ‘kill’ is not treated as a verb pair by Hayatsu since the two verbs are not morphologically related. Also, Hayatsu does not treat verbs like *ukaru* ‘pass (an exam)’ vs. *ukeru* ‘take (an exam)’, *mookaru* ‘be earned’ vs. *mookeru* ‘earn’ etc. which are morphologically and semantically related but not related syntactically (at least in contemporary Japanese) as forming a lexical pair. Jacobsen (1992) treats morphologically related verbs like *ukaru* ‘pass (an exam)’ vs. *ukeru* ‘take (an exam)’, *mookaru* ‘be earned’ vs. *mookeru* ‘earn’ as paired verbs while leaving out morphologically unrelated pair like *sinu* ‘die’ vs. *korosu* ‘kill’. Narrog et al. (2015) treat two verbs as constituting a lexical pair as long as they share a core event to which an agent/causer is added only in the case of the transitive verb.

## 4.3 Prediction of whether a verb would be paired or unpaired

Particularly in the domestic *Nihongogaku* discipline, there has been a lot of discussion on the issue of predictability of whether or not an intransitive verb would have a corresponding lexical transitive counterpart or the converse, that is, whether or not a transitive verb would have a corresponding lexical intransitive counterpart. Previous research has revealed that this phenomenon is not accidental but is semantically motivated and therefore largely predictable.

### 4.3.1 Paired intransitives (*yūtsui jidōshi*) vs. unpaired intransitives (*muttsui jidōshi*)

Nishio (1978: 174) notes that the intransitive verbs possessing a lexical transitive counterpart (*yūtsui jidōshi*) have the general characteristics: (i) most, if not all, convey the meaning of a change-of-state which the subject of the verb in question has

undergone; (ii) they can be called ‘middle verbs’ (*chūsōdōshi*) like those in Indo-European languages; (iii) they do not yield direct or indirect passive and thus belong to Mikami’s *shodōshi* (inactive verbs) category; (iv) in their *-te iru* aspectual form they convey the continuation of the result of the change-of-state which the subject of the verb in question has undergone; (v) they are largely instantaneous or punctual verbs (*shunkan-dōshi*); and (vi) they are non-volitional verbs (*muishi-dōshi*) and hence do not yield the imperative form or volitional form (‘-(y)oo’ form). Building on Nishio’s work, Hayatsu (1987: 83) observes that the paired intransitives (*yūsui jidōshi*) have the following two core characteristics: (i) the subject of paired intransitives is generally an inanimate entity, and (ii) they generally convey change-of-state in the inanimate subject which can potentially be brought about by some force (*hatarakikake*) [an ‘external’ force in the case of non-middle verb types that is depicted by the corresponding transitive counterpart and an ‘internal’ force in the case of middle verb types].

In the typological literature, Haspelmath (1993: 93) observes that the crucial semantic condition for an intransitive verb (‘inchoative’ in his terms) to have a transitive counterpart (causative verb in his terms) is the absence of agent-oriented meaning components in the intransitive verb, which is broadly consonant with the core characteristic pointed out by Hayatsu (1987) that the subject of paired intransitives is generally an inanimate entity.

#### 4.3.2 Paired transitives (*yūsui tadōshi*) vs. unpaired transitives (*mitsui tadōshi*)

About unpaired transitives (*mitsui tadōshi*) and paired transitives (*yūsui tadōshi*) Miyajima (1972: 218) offers the penetrating insight that while some transitive verbs express only progression (or development) of an action (*dōsa no keika*), without an active commitment to the result/outcome of that action (*dōsa no kekka*), others express result or outcome of an action without actively expressing the manner/means by which the result came into being. Miyajima further observes that the former type tends to lack a corresponding intransitive counterpart (*mitsui tadōshi* or unpaired transitive), while the latter tend to have a corresponding intransitive counterpart (*yūsui tadōshi* or paired transitive). Unpaired transitive verbs, such as *naguru* ‘beat’, *ketobasu* ‘kick away’, *osaeru* ‘make an attempt to suppress’ etc., express only an action (*hatarakikake*) by the subject on the object with no regard to the resultant change in the object. On the other hand, paired transitive verbs, such as *takameru* ‘raise’, *sizumeru* ‘sink, send to bottom’, *someru* ‘dye’, *kuzusu* ‘pull down, knock down’, *yogosu* ‘make something dirty, stain’, involve both the action (*hatarakikake*) of the subject on the object as well as the resultant change of state undergone by the object (*taishō no henka*), which is expressed by the corresponding intransitive verb such as *takamaru* ‘rise’, *sizumaru* ‘be sunk, go to the bottom’, *somaru* ‘be dyed’, *kuzureu* ‘collapse, crumble’, *yogoreru* ‘become dirty, be stained’,

respectively. To substantiate his claim, Miyajima (1972) presents a detailed discussion on the differences between near synonymous verbs such as *hosu* ‘air for drying’ vs. *kawakasu* ‘dry or desiccate something’ (pp. 224–228), *aburu* ‘pass over a flame’ vs. *atatameru* ‘warm/heat up something’ (pp. 320–321) and *kasegu* ‘work for making gains’ vs. *mookeru* ‘make a profit’ (pp. 334–335), wherein *hosu* ‘air for drying’, *aburu* ‘pass over a flame’, and *kasegu* ‘work for making gains’ lack intransitive counterparts, while *kawakasu* ‘dry or desiccate something’, *atatameru* ‘warm/heat up something’, and *mookeru* ‘make profit’ have intransitive counterparts, viz. *kawaku* ‘become dry’, *atatamaru* ‘become hot’, and *mookaru* ‘be profited’, respectively.

Building on Miyajima’s insights, Hayatsu (1989: 232) observes that most unpaired transitives tend to focus on the manner of the process of the action (*hatarakikake no katei no yōtai*), while most paired transitives focus on the resultant state of the action (*hatarakikake no kekka jōtai*). To buttress her claim she offers 5 diagnostic tests: (i) entailment of change of state of the object, (ii) possibility of repetition of the action by the subject on the object, (iii) co-occurrence with an adverbial complement modifying the manner of the action versus those modifying the result of the action, (iv) possibility of occupying the first (V1) or second (V2) constituent slot of a transitive compound verb (V1+V2) which entails the intended result of an action, and (v) ability to derive agentive verbal nouns, such as *V (infinitive) + syu* (主), *te* (手), *zin* (人), *ya* (屋), *ko* (子), *shi* (師), *ke* (家).

Recasting the foregoing discussion in the Vendlerian scheme, unpaired transitive verbs tend to be activity verbs (atelic, with no culmination point), while paired transitive verbs tend to be accomplishment verbs (telic, with a culmination point).

#### 4.4 Alternations in canonical and non-canonical transitive sentences

Lexical pairs of transitive (causative) and intransitive (non-causative) verbs share a ‘basic situation’, generally a change of state or a non-agentive activity/motion, but semantically differ from each other in terms of presence or absence of an agent-causer who causes or brings about the shared basic situation. The causative counterpart (e.g. *kowasu* ‘destroy’, *mawasu* ‘rotate/spin’) includes an agent bringing about the basic situation, while the non-causative counterpart lacks an agent-causer and portrays the basic situation as occurring spontaneously (e.g. *kowareru* ‘be destroyed’, *mawaru* ‘rotate/spin’). Haspelmath (1993: 89) adds that the semantic difference here refers to ‘conceptual’ meanings and not ‘objective’ meanings. In fact, these characterizations are also shared by theoretical investigations in the framework of lexical semantics or conceptual semantics, as in Levin and Rappaport Hovav (1995) for English and Kageyama (1996) for Japanese.

Notably, however, there is a unique class of verbs that cannot be accounted for by the generalizations made for the canonical type of transitive sentences. Kageyama

(2002) thus points out that pairs of transitive and intransitive sentences like those in (7) and (8) qualify for transitivity alternations.

- (7) a. *Konpyuutaa ni misu ga syoozi-ta.* (intransitive)  
 computer DAT error NOM issue-PST  
 ‘An error cropped up in the computer.’
- b. *Konpyuutaa ga misu o syoozi-ta.* (transitive)  
 computer NOM error ACC issue-PST  
 ‘The computer produced an error.’
- (8) a. *Ki kara me ga hui-ta.* (intransitive)  
 tree from bud NOM shoot.out-PST  
 ‘Buds shot out from the tree.’
- b. *Ki ga me o hui-ta.* (transitive)  
 tree NOM bud ACC shoot.out-PST  
 ‘The tree shot out buds.’

This kind of alternation is morphologically peculiar because it is not accompanied with any valency-changing suffix and it is semantically special in that it applies only to a small number of verbs that denote the appearance or production of an entity out of a container, thus paralleling English paired sentences like *Oil gushed from the tanker* and *The tanker gushed oil*. The most interesting property of the transitive sentences of this type, however, is that their subjects (‘computer’, ‘tree’, ‘tanker’) do not count as agents or causers, as evidenced by the fact that these transitive sentences fail to undergo passivization.

- (9) \**Misu ga konpyuutaa ni syoozi-rare-ta.* Cf. (7b)  
 error NOM computer by issue-PASS-PST  
 Lit. ‘An error was produced by the computer.’

Kageyama (2002) concludes that Japanese sentences like (7b) and (8b) and English sentences like *The tanker gushed oil* have an “unaccusative transitive structure”, which has only a low degree of transitivity.

Another construction that is transitive and yet has low transitivity has to do with reflexive sentences like the following.

- (10) a. *Kuti o ookiku ake-te!*  
 mouth ACC wide open<sub>TR</sub>-GER  
 ‘Open your mouth wide!’
- b. *Kuti o ookiku ai-te!* (Dentist says to patient)  
 mouth ACC wide open<sub>INTR</sub>-GER (Same meaning as a)

As shown by (10b), the regular alternation of transitive *ak-e(ru)* and intransitive *ak(u)* can be waived and the intransitive variant is used with a direct object in a special context in which the agent-subject opens his/her own mouth. This suggests that the canonical transitivity alternations with systematic verb morphology are restricted to transitive sentences of high transitivity where the subject is an agent and the object is a theme; Transitivity alternations may take place in other constructions of lower transitivity, but only with irregular morphology or no morphology.

## 4.5 Direction of derivation in transitivity alternations

We are now in a position to probe into the most difficult problem of the directionality of derivation in transitivity alternations. In the framework of early generative grammar, Okutsu (1967) postulated three types of derivation: transitivity (e.g. *kawak(u)* ‘dry<sub>INTR</sub>’/*kawak-as(u)* [dry<sub>INTR</sub>-CAUS] ‘dry<sub>TR</sub>’), intransitivity (e.g. *kir(u)* ‘cut’/*kir-e(ru)* [cut-SUF] ‘be cut, become separate’), and polarization (e.g. *ag-ar(u)* ‘go up’/*ag-e(ru)* ‘send up’). These three types, already illustrated in Table 3 above, are motivated by morphological shapes. It was Jacobsen (1985) who proposed to capture these formal basic-derived relationships in terms of semantics.

Using the theory of markedness, Jacobsen (1985) proposes that the derivational relations can be predicted in the following way. Those changes of state/location that are perceived as normally occurring of their own accord or as being brought about by an entity in itself would be formally basic in their intransitive use (i.e. they will participate in a causative alternation in which the transitive verb is derived from the formally basic intransitive verb), while changes that are normally perceived to be brought about by an outside force would be formally basic in their transitive use (i.e. they will participate in an anticausative alternation in which the intransitive verb is derived from the formally basic transitive verb). In a nutshell, Jacobsen’s (1992) proposal is that the correlation between experiential basic-derived relationships and formal basic-derived relationships falls out as a reflection of form-meaning iconicity. The empirical validity of Jacobsen’s proposal is largely confirmed by examples like those in (11) taken from Jacobsen (2016: 22), although it remains to be seen whether it holds for all of the more than 300 existing pairs.

- (11) a. Transitive marked (Causative pattern)
- |                             |   |
|-----------------------------|---|
| <i>ak(u)/ak-e(ru)</i>       | ‘open <sub>in</sub> /open <sub>tr</sub> ’   |
| <i>sizum(u)/sizum-e(ru)</i> | ‘sink <sub>in</sub> /sink <sub>tr</sub> ’   |
| <i>sodat(u)/sodat-e(ru)</i> | ‘grow/raise’                                |
| <i>tuk(u)/tuk-e(ru)</i>     | ‘become attached/attach’                    |
| <i>ukab(u)/ukab-e(ru)</i>   | ‘float <sub>in</sub> /float <sub>tr</sub> ’ |

- b. Intransitive marked (Anticausative pattern)
- |                             |   |
|-----------------------------|---|
| <i>kir-e(ru)/kir(u)</i>     | ‘become cut/cut’  |
| <i>kudak-e(ru)/kudak(u)</i> | ‘become smashed/smash’  |
| <i>nuk-e(ru)/nuk(u)</i>     | ‘come out/pull out’   |
| <i>war-e(ru)/war(u)</i>     | ‘break <sub>in</sub> , split <sub>in</sub> /break <sub>tr</sub> , split <sub>tr</sub> ’ |
| <i>yak-e(ru)/yak(u)</i>     | ‘burn <sub>in</sub> /burn <sub>tr</sub> ’   |
- c. Equipollent (Transitive and intransitive equally marked)
- |                              |   |
|------------------------------|---|
| <i>ag-ar(u)/ag-e(ru)</i>     | ‘rise/raise’                                  |
| <i>kaw-ar(u)/ka[w]-e(ru)</i> | ‘change <sub>in</sub> /change <sub>tr</sub> ’ |
| <i>mag-ar(u)/mag-e(ru)</i>   | ‘bend <sub>in</sub> /bend <sub>tr</sub> ’     |
| <i>sag-ar(u)/sag-e(ru)</i>   | ‘become lower/lower’                          |
| <i>tom-ar(u)/tom-e(ru)</i>   | ‘stop <sub>in</sub> /stop <sub>tr</sub> ’     |

Inspired by the studies by Nedjalkov (1969) and Jacobsen (1985) on lexical pairs of intransitive and transitive verbs, Haspelmath (1993) conducted a study of 31 pairs of inchoative (non-causative) and causative verbs from 21 languages. Following Nedjalkov (1969), Haspelmath categorizes these verb pairs into three categories on the basis of the formal relationship between the members of the pair: (i) causative alternation: the inchoative (non-causative) is basic and the causative is derived, (ii) anti-causative alternation: the causative is basic and the inchoative (non-causative) is derived, (iii) non-directed alternation: neither the inchoative (non-causative) nor the causative verb is derived from the other. The non-directed alternation is further divided into three subcategories: equipollent alternations, suppletive alternations, and labile alternations. In equipollent alternations both members of the pair are derived from the same stem expressing the basic situation by means of different affixes (e.g. *hazim-ar(u)* ‘start (intr.)’ / *hazim-e(ru)* ‘start (tr.)’), or different auxiliary verbs or different stem modifications. In the suppletive alternations different roots are used (e.g. *sin(u)* ‘to die’ / *koros(u)* ‘to kill’) and finally in the labile alternations the same verb is used in the inchoative as well as causative sense (e.g. *hirak(u)* ‘open (intr.)’ / *hirak(u)* ‘open (tr.)’). Following Jacobsen (1985), Haspelmath (1993: 103) proposes that the probability of an outside force bringing about an event is a factor favoring anticausative alternation. Conversely, if the event is more likely to happen without the presence of an outside force, causative alternation is favored. Like Jacobsen, Haspelmath (1993: 106) also claims that this correlation between formal and semantic basic-derived relationships is a reflection of ‘iconicity’, which can be summarized by Givón’s (1991: 106) principle: categories that are cognitively marked tend also to be structurally marked. Jacobsen (1992: 14) as well as Haspelmath (1993: 105) notes that there are some changes that are incapable of being ‘typically’ identifiable either as occurring spontaneously or as being brought about by an outside entity or force. For such changes, the direction of formal derivation is not predictable.

Based on the ratio of anticausative (A) to causative alternation (C) attested in the data pool of 21 languages for each verb pair, Haspelmath ranks the 31 verb pairs in ascending order of A/C ratio (1993, Table 4). Verb meanings such as ‘boil’, ‘freeze’, and ‘dry’ rank on the top side of the table with the lowest A/C ratio (that is they participate mostly in the causative alternation), while verb meanings such as ‘split’, ‘close’, and ‘break’ rank on the bottom side of the table with the highest A/C ratio (that is they participate mostly in the anticausative alternation). These predictions can be tested using the World Atlas of Transitivity Pairs (WATP) developed at NINJAL (<http://warp.ninjal.ac.jp/en/>), which consists of data from around 80 languages (as of December 2016). For Japanese and most other languages the tendencies in direction of formal derivation observed for the verbs on the top and the bottom end of Haspelmath’s (1993) Table 4 are fairly robust (see the ‘slopegraph’ function of WATP). Verb meanings lying in between these two extremes are indeterminate cases and no reliable prediction can be made for the formal direction of their derivation. The following example from Japanese and Marathi of the verb meaning ‘dry’ on the top end of Haspelmath’s (1993) Table 4 is testimony to this tendency: In both languages direction of formal derivation is from intransitive to transitive.

- (12) a. *Syatu ga kawai-ta.*  
 shirt NOM dry-PST  
 ‘The shirt dried.’
- b. *Haha ga doraiyaa de syatu o kawak-asi-ta.*  
 mother NOM dryer with shirt ACC dry-CAUS-PST  
 ‘Mother dried the shirt with dryer.’
- (13) a. *sharṭ wāl-l-ā.*  
 shirt.MSg dry-PST-MSg  
 ‘The shirt dried.’
- b. *āi-ne ḍrāyar-ne sharṭ wāl-aw-l-ā.*  
 mother-ERG dryer-with shirt.MSg dry-CAUS-PST-MSg  
 ‘Mother dried the shirt with dryer.’

More recently, the “cognitive (semantic) or iconic motivation” approach to formal basic-derived relationship between members of lexical verb pairs has been criticized by Haspelmath himself. Haspelmath et al. (2014: 589) argue that the form-meaning parallelism is problematic. From the form-meaning parallelism perspective, it would be difficult to explain why anti-causatives are formally complex when they are semantically simple as compared to their corresponding causative counterpart. On the other hand, if causatives are considered semantically simple [from which non-causatives are derived, as Levin and Rappaport Hovav (1995) do], then it is difficult to explain why causatives are formally complex as compared to their corresponding



non-causative counterparts. The solution Haspelmath et al. (2014) propose is an ‘economic motivation’ or form-frequency correspondence principle: languages tend to use less coding material for more frequent expressions. Thus, in the case of non-causative/causative verb pairs which share a core-event and differ minimally in meaning, the less frequent verb will tend to be overtly coded or coded with more coding material, while the more frequent verb will tend to be zero coded or coded with less coding material (2014: 592). Analyzing the frequency data of 20 verbs from 7 languages (English, Japanese, Maltese, Romanian, Russian, Swahili and Turkish), Haspelmath et al. demonstrate that causative prominence in the case of causal-noncausal verb pairs attested across languages correlates significantly with lower frequency of the causal member of the pair.

Using a comprehensive list consisting of over 450 pairs of causal-noncausal verb pairs in Japanese prepared by Narrog et al. (2015) [<http://watp.ninjal.ac.jp/resources/>] and using NINJAL-LWP for BCCWJ (<http://nlb.ninjal.ac.jp/>) to search the frequency of relevant verbs, Narrog, Pardeshi and Akasegawa (2015: 35, Table 4) test the form-frequency correspondence principle proposed by Haspelmath et al. (2014) and report that it is borne out in 79% of the pairs.

The frequency approach begs the question of why there are more or less frequent verbs in the first place. One can argue that frequency is itself largely predictable in terms of what counts as more or less “normal” in human experience.

## 4.6 Lexical or basic valence orientation

Nichols, Peterson, and Barnes (2004) have proposed lexical or basic valence orientation as a parameter on the basis of which languages of the world can be broadly classified into four groups: (i) transitivity type: those which tend to treat intransitives as basic and transitives as derived, (ii) detransitivizing type: those which tend to treat transitives as basic and intransitives as derived, (iii) neutral type: those which treat both members of the lexical pair as derived, and (iv) intermediate type: those which treat both members of the lexical pair as underived. For this typology, they use a sample of 18 verb pairs as a yardstick to classify a language. Their attempt is to classify a language as a whole on the basis of a sample of the verbal lexicon, hence this is a case of holistic lexical typology. Of the 18 pairs in the sample, half (Pairs 1–9) have varying degrees of agency and volition on the part of an animate S/O and the other half (Pairs 10–18) have varying degrees of independence, resistance to force etc. on the part of an inanimate S/O. They refer to pairs 1–9 [1. ‘laugh’ vs. ‘make laugh, amuse, strike as funny’; 2. ‘die’ vs. ‘kill’; 3. ‘sit’ vs. ‘seat, have sit, make sit’; 4. ‘eat’ vs. ‘feed, give food’; 5. ‘learn, know’ vs. ‘teach’; 6. ‘see’ vs. ‘show’; 7. ‘be/become angry’ vs. ‘anger, make angry’; 8. ‘fear, be afraid’ vs. ‘frighten, scare’; 9. ‘hide, go into hiding’ vs. ‘hide, conceal, put into hiding’] as ‘animate verbs’ and those in 10–18 [10. ‘(come to) a boil’ vs. ‘(bring to) a boil’; 11. ‘burn, catch fire’ vs.

'burn, set fire'; 12. 'break' vs. 'break'; 13. 'open' vs. 'open'; 14. 'dry' vs. 'make dry'; 15. 'be/become straight' vs. 'straighten, make straight'; 16. 'hang' vs. 'hang (up)'; 17. 'turn over' vs. 'turn over'; 18. 'fall' vs. 'drop, let fall'] as 'inanimate verbs' [see Nichols, Peterson and Barnes (2004: 156, Table 2)]. Nichols, Peterson, and Barnes (2004: Appendix 5: 207–209) include 80 languages in their survey, one of which is Japanese. According to their analysis, Japanese can be classified as the transitivizing type with regard to animate verbs, while it cannot be classified into any of the four types with regard to inanimate verbs (Appendix 3, 189–196).

## 4.7 The status of agents in intransitive variants

An important issue that is hardly discussed in statistics-based typological studies but has been hotly debated in theoretical approaches to transitivity alternations is whether the intransitive variants have an agent (overtly or covertly). In the literature, intransitivization of transitive verbs – called “anticausativation” – is commonly assumed to wipe out the original agent argument, with the consequence that the intransitive variants totally lack agents, not just in syntactic structure but also in lexical semantic structure (Horvath and Siloni 2011). In fact, the absence of agents in intransitivized verbs has been empirically confirmed by in-depth studies on European languages such as Levin and Rappaport Hovav (1995) on English and Schäfer (2008) on German, and theoretical discussions have centered around on the question of how the agent arguments of causative verbs become invisible to syntax upon anticausativization (Levin and Rappaport Hovav 1995; Reinhart 2002; Schäfer 2008; Koontz-Garboden 2009; Alexiadou 2010; Rappaport Hovav and Levin 2012, among others). Japanese data, however, strongly suggest that these theories are not entirely correct.

Jacobsen (1992) and Kageyama (1996) point out the existence of a large number of Japanese intransitive variants in the causative/non-causative pairs that cannot be easily translated into English other than by passives. Some examples are shown in (14).

- (14) *mook-ar(u)* 'be earned' from *mook-e(ru)* 'earn (money)' (classical J. *mook-u*)  
*tasuk-ar(u)* 'be saved' from *tasuk-e(ru)* 'save' (classical J. *tasuk-u*)  
*mituk-ar(u)* 'be found/discovered' from *mituk-e(ru)* (classical J. *mituk-u*)  
*uw-ar(u)* 'be planted' from *u-e(ru)* 'plant' (classical J. *uw-u*)

Semantically, the events described by those intransitive verbs cannot take place without volitional instigation by a human agent. The intransitive verbs in (14), called “decausatives” by Kageyama (1996), should be distinguished from the anticausative intransitives, which lack agents. Kageyama (1996) demonstrates the necessity of this distinction on the basis of the compatibility or incompatibility with such adverbs as 'all by itself' (implying no agent) and 'with great effort' (implying an agent).

- (15) a. Anticausatives (intransitive variants that have no agents)  
*Kami ga {katteni / \*te o tukusite yatto} yabur-e-ta.*  
 paper NOM {all.by.itself / \*with.great.effort} tear-ANTICAUS-PST  
 ‘The paper tore {by itself / \*with great effort}.
- b. Decausatives (intransitive variants that imply agents)  
*Takaramono ga {te o tukusite yatto / \*katteni} mituk-at-ta.*  
 treasure NOM {with.great.effort / \*all.by.itself} find-DECAUS-PST  
 ‘The treasure was found {with great effort / \*all by itself}.

An interesting feature of the intransitive variants in (15) is, as observed by Jacobsen (1992) and Kageyama (1996), that they share the suffix *-ar*, which is also found in the so-called lexical passives like *tukamar(u)* ‘be arrested’ (cf. *tukamae(ru)* ‘arrest’). Interestingly, some of these decausative verbs do permit an overt presence of the human agent as shown in (16a) and (17a) and resemble the passive counterparts [see (16b) and (17b)] of the related transitive verbs [see (16c) and (17c)] in terms of the surface structure [examples adopted from Kishimoto (2015)].

- (16) a. *Hesokuri ga tuma ni mituk-at-ta.*  
 secret.savings NOM wife by find-DECAUS-PST  
 ‘The secret saving was found by my wife.’
- b. *Hesokuri ga tuma ni mituke-rare-ta.*  
 secret.savings NOM wife by find-PASS-PST  
 ‘The secret saving was found by my wife.’
- c. *Tuma ga hesokuri o mitsuke-ta.*  
 wife NOM secret.savings ACC find-PST  
 ‘My wife found the secret savings.’
- (17) a. *Doroboo ga keikan ni tukam-at-ta.*  
 thief NOM police by catch-DECAUS-PST  
 ‘The thief was caught by the police.’
- b. *Doroboo ga keikan ni tukamae-rare-ta.*  
 thief NOM police by catch-PASS-PST  
 ‘The thief was caught by the police.’
- c. *Keikan ga doroboo o tukamae-ta.*  
 police NOM thief ACC catch-PST  
 ‘The police caught the thief.’

Kishimoto (2015) proposes that the overt presence of the human agent in the decausative type intransitives is licensed by identification of the agent with a locational element in the semantic structure of these verbs.

Kageyama (2016) argues that this same suffix *-ar* also participates in the fairly productive intransitivization (decausativization) of V-V compound verbs, as in *kaki-ag-ar(u)* ‘be finished writing’ from *kaki-ag-e(ru)* ‘finish writing’ and *taki-ag-ar(u)* ‘be finished cooking’ from *taki-ag-e(ru)* ‘finish cooking’. According to Kageyama (2016), *-ar* has the function of promoting an object argument to subject with suppression of an agent argument in lexical semantic structure. It remains to be seen whether the distinction between anticausativization and decausativization found in Japanese is available in other languages.

## 5 Transitivity at the clausal level

This section addresses issues of transitivity at the clausal level, discussing the canonical transitive and intransitive constructions in Section 5.1 and some non-canonical constructions in Sections 5.2–5.5.

### 5.1 Canonical transitive constructions

As its etymology (Latin *transire* “go or cross over”) suggests, transitivity is considered to be a global property of a whole clause consisting of two participants wherein the action originating in the proto-agent participant goes or crosses over to the proto-patient participant, which is typically a distinct entity. Following Hopper and Thompson (1980), Tsunoda (1985), Jacobsen (1992), Givón (1995), Náess (2007), Lazard (2003, 2015), and many other typologically-oriented researchers define the canonical transitive event as one which is instigated by a volitionally acting human entity that directs its action at a patient entity with the intention of bringing about a particular change in the patient entity. Lazard (2003: 149, 153) suggests “prototypical action” as a superordinate notion that includes all the parameters of semantic transitivity in the prototype theory of Hopper and Thompson (1980). Specifically, Lazard (2003: 152) defines the prototypical action (PrA) as “an effective volitional discrete action performed by a controlling agent and actually affecting a well individuated patient.” He comments that every language has a syntactic construction (a clause type) to express the prototypical action and calls that construction the “major biactant construction (MBC)”, the formal properties of which may vary from one language to another. He further adds that the major biactant construction is a “typical transitive sentence” in any language. In a similar vein, every language would have a syntactic construction (a clause type) to express one participant processes which Lazard (2003: 165) calls ‘(major) one-actant construction’ that would be a typical intransitive sentence in any language. Lazard (2003), however, does not elaborate on ‘(major) one-actant construction.’ Let us assume that this construction subsumes both (i) situations involving a telic act in real time of a volitional agent that is high in

potency and is confined to the sphere of the agent and (ii) situations involving a semantic object undergoing a change in real time.

The major one-actant construction (or the typical intransitive sentence) and major biactant construction (or the typical transitive sentence) in Japanese are exemplified below. In the major one-actant construction in (18a, b), the subject is marked with the nominative *ga*. In the major biactant construction in (19), the subject is marked with the nominative *ga*, and the object with the accusative *o*.

(18) The major one-actant construction

- a. *Kodomo ga saken-da.*  
child NOM shout-PST  
'The child shouted.'
- b. *Kabin ga ware-ta*  
vase NOM break-PST  
'The vase broke.'

(19) The major biactant construction

- Taroo ga sara o wat-ta.*  
Taro NOM plate ACC break-PST  
'Taro broke the plate.'

Lazard's approach is similar in spirit to that of Tsunoda (1981: 395–397), who proposes a hierarchy of two-place predicates on the basis of the degree of effectiveness/conclusiveness of the transitive action or the degree of affectedness of the patient.

(20) Verb-type hierarchy: Tsunoda (1981: 395)

- Direct effect (Type 1) >> Perception (Type 2) >> Pursuit (Type 3) >> Knowledge (Type 4) >> Feeling (Type 5) >> Relation (Type 6)

Tsunoda (1985: 388) presents a revised version of verb-type hierarchy and refers to it as the 'transitivity scale of two-place predicates'. Verb classes on the higher end of the hierarchy conform to the transitivity prototype [in Tsunoda's terms satisfy an 'Effectiveness Condition'; a notion that primarily subsumes parameters related to O, such as affectedness of O, individuation of O (specificity, definiteness) and also the actuality and telicity of an action], while those on the lower end deviate from the transitive prototype in one or more parameters. The decrease in the degree of transitivity, Tsunoda argues, is reflected in the formal encoding of the event participants (for a broader typological account of case pattern splits see Malchukov 2005). Kishimoto, Kageyama, and Sasaki (2015) present a succinct overview of the Japanese valency classes and their case frames.

It should be noted that both the major one-actant as well as biactant constructions illustrated in (18) and (19) are also used to express non-canonical situations (cf. Shibatani 2001a, b). For example, the major one-actant construction in (18a) can be used to encode states as shown in the following examples.

- (21) a. Adjective as predicate  
*Taroo ga yasasi-i.*  
 Taro NOM kind-PRS  
 'Taro is kind.'
- b. Adjectival noun as predicate  
*Taroo ga ganko da.*  
 Taro NOM stubborn COP  
 'Taro is stubborn.'
- c. Noun as predicate  
*Taroo ga koomuin da.*  
 Taro NOM government.employee COP  
 'Taro is a government employee.'

Similarly, the major biactant construction in (19) may be recruited to encode situations where the patient-object is partially or not at all affected, as shown by the following examples.

- (22) a. *Taroo ga sara o sawat-ta.*  
 Taro NOM plate ACC touch-PST  
 'Taro touched the plate.'
- b. *Taroo ga kabe o osi-ta.*  
 Taro NOM wall ACC push-PST  
 'Taro pushed the wall.'

Furthermore, the same biactant construction can be used to express intransitive self-propelling motion events in which the subject moves through a path expressed by the accusative marked phrase.

- (23) a. *Taroo ga kawa.zoi o arui-ta.*  
 Taro NOM river.along ACC walk-PST  
 'Taro walked along the river.'
- b. *Tori ga sora o ton-de iru.*  
 bird NOM sky ACC fly-GER be.PRS  
 'A bird is flying in the sky.'

Examples (22) and (23) depict situations involving two participants but deviating from PrA [“an effective volitional discrete action performed by a controlling agent and actually affecting a well individuated patient”] and are considered as non-PrA situations. Lazard considers such non-canonical constructions as “in-between constructions” and places them between the major biactant construction and the major one-actant construction on the transitivity continuum. In the following sections, four salient non-canonical constructions deviating on the agency parameter are discussed.

## 5.2 Involuntary agent constructions

Prototypical transitive events are instigated by a volitionally acting human agent-subject. However, there are some events in which the human agent inadvertently happens to instigate an event, often leading to bringing about an unintended change in the patient. Such events are referred to as ‘involuntary agent events’ and the construction encoding them as the ‘involuntary agent construction’ in the typological literature (Kittilä 2005, Fauconnier 2011). For Japanese, Teramura (1982), Ikegami (1982), Amano (1987), Nishimura (1997), and Fukami (1997), among others, have also pointed out that Japanese allows transitive encoding of involuntary agent events, which are also referred to as ‘accidental’ events.

Amano (1987) discusses transitive sentences like those in (24) and (25) in which the subject is respectively an experiencer and inadvertent causer or cause of the event expressed by the concatenation of {object + matrix verb}.

- (24) *Watasitati wa kuusyuu de kazaidoogu o minna yai-te*  
 we TOP air.strike by furniture ACC all burn (tr)-CP  
*simat-ta.*  
 put.away-PST  
 ‘Much to our misfortune, we lost all our furniture in the fire caused by the airstrike.’

- (25) *Zyon wa omowazu mado ni te o tu.i-te,*  
 John TOP inadvertently window DAT hand ACC touch-CP  
*mado o kowas.i-te simat-ta.*  
 window ACC break-CP put.away-PST  
 ‘John inadvertently pressed his hand against the window and happened to break it.’

Amano (1987) claims that the following two are ‘necessary’ (but not sufficient) conditions for the non-volitional interpretation of a transitive sentence: (i) the transitive verb is an accomplishment verb entailing the result, and (ii) the noun phrase

marked by the accusative is closely related to the protagonist or topic (usually an object in his possession), which she characterizes as a ‘part-whole’ relationship in the broadest sense of the term. In sum, the topic of such sentences either (i) experiences a change of state in the object instigated by some other agency or (ii) undergoes a change of state herself owing to a concomitant change that the object undergoes.

For accidental events caused by the subject such as in (25), Ikegami (1982: 110) argues that a de-agentivized (accidental) act of the actor/causer is construed as equivalent to an agentivized (intentional) act through the attribution of ‘responsibility’ to the actor for failing to prevent the consequence (viz. the caused sub-event). Since the de-agentivized (accidental) act is construed as an agentivized (intentional) act, the former is encoded similarly to that of the latter using a transitive verb. In other words, ‘preventability’ of the result (caused event) dictates the use of a transitive verb in encoding accidental events, which are also referred to as ‘responsible events’ (see Nishimitsu 2002; Pardeshi 2002).

Crosslinguistic variation in the linguistic encoding of involuntary agent events/accidental events/responsible events, especially between Japanese and English, has attracted the attention of several linguists (Alfonso 1971; DeLancey 1983, 1984, 1985; Hinds 1986, among others) as well as psychologists (Fausey, Long, Inamori and Boroditsky 2010; Fausey and Boroditsky 2011). Fukami (1997) is a linguistic study that shows similarities and differences between Japanese and Korean in the encoding of accidental events. Pardeshi (2002) also reports on a contrastive study of accidental or non-intentional events in Japanese and Indic languages, claiming that Japanese tends to encode accidental events with a transitive construction, while Indic languages tend to encode them as intransitive constructions. The following examples in (26a) from Japanese and in (26b, c) from Marathi (Indic) illustrates this contrast.

- (26) a. *Kare-wa ukkari koppu o wat-te simat-ta.*  
 he-TOP inadvertently cup ACC break-GER put.away-PST  
 ‘He inadvertently broke the cup.’
- \*b. *t-yā-ne nakaḷat kap phoḍ-l-ā.*  
 he-OBL-ERG inadvertently cup.MSG break(tr.)-PST-MSg  
 ‘He inadvertently broke the cup.’
- c. *t-yā-č-ya-hat-un nakaḷat kap.*  
 he-OBL-GEN-OBL-hand-from inadvertently cup.MSG  
*phuṭ-l-ā [Mar]*  
 break(intr)-PST-MSg  
 ‘He inadvertently broke the cup.’



A few psycholinguistic studies have also been conducted comparing the encoding of accidental events in Japanese and other languages of the world. Pardeshi and Yoshinari (2012) report a pilot study in which they used a non-linguistic stimulus (a video clip depicting an accidental and an intentional event) to elicit linguistic responses from Japanese and Marathi speakers. Their results demonstrate that Japanese is more liberal than Marathi in the transitive encoding of accidental events and corroborate the findings of Pardeshi (2002). Yoshinari, Pardeshi and Chung (2014) is a contrastive study of involuntary agent constructions in Japanese and Korean. Drawing inspiration from Ikegami (1982), who proposes ‘preventability’ of the result as a causal factor affecting whether or not a transitive verb is used in the depiction of an accidental event, they manipulated the causes related to the preventability of the result in an attempt to see if that affects the use of transitive verbs in Japanese and Korean. Their results suggest that although the perception of preventability of the cause was same in both Japanese and Korean, the use of transitive verbs varied between the two languages. They speculate that the locus of causality might be related to use of transitive verbs in the depiction of accidental events. Chung (2009) argues that transitive encoding of non-intentional events in Japanese is neither motivated by the notion of ‘possession’ or ‘responsibility’ as previous researchers claim, but rather by the schematic meaning of an abstract super-ordinate level predicate HAVE which she refers to as a HAVE-schema.

### 5.3 Non-human agent constructions

Non-human agent events (sometimes also referred to as ‘natural force’ events) are often encoded using a transitive verb with the canonical NOM-ACC case frame as shown in the following examples.

- (27) *Tunami ga mati o nomikonda.*  
 Tsunami NOM town ACC swallow.PST  
 ‘The tsunami swallowed the town.’
- (28) *Kyodaizisin ga genpatu o osotta.*  
 great.earthquake NOM nuclear.plant ACC attack.PST  
 ‘Great earthquake attacked the nuclear plant.’
- (29) *Daityoogan ga kare no inoti o ubatta.*  
 colorectal.cancer NOM he GEN life ACC steal.PST  
 ‘Colorectal cancer stole his life.’

The causer subjects of these events are non-volitional entities and thus they deviate from Hopper and Thompson’s transitive prototype in Table 1 in terms of the volitionality

parameter. They also deviate from Dowty's (1991: 572) PROTO-AGENT role quoted below in terms of the volition and sentience parameters.

- (30) Contributing properties of the Agent Proto-Role
- a. volitional involvement in the event or state
  - b. sentience (and/or perception)
  - c. causing an event or change of state in another participant
  - d. movement relative to another participant
  - e. exists independently of the event named by the verb

Unlike canonical transitive sentences, transitive sentences involving non-human subjects seem to be restricted in terms of their distribution. They are generally found in literary works and tend to occur more frequently in attributive uses (around 130 hits were obtained on Google search with the search string '*X o nomikonda tunami*' dated 30 Nov 2016) rather than sentence final predicative uses [as in (27) through (29)] (around 70 hits were obtained on Google search with the search string '*tunami ga X o nomikonda*' dated 30 Nov 2016). English seems to be more liberal in encoding the non-human agent construction with the major biactant construction than Japanese (and Indic languages).

## 5.4 Instigator (indirect causative) constructions

Ikegami (1982: 95–102) discusses the following sentences which according to him are ambiguous between the indirect causative reading (the causer-subject instigates the event which is then executed by the agentive causee distinct from the causer) and the direct causative reading (the causer-subject instigates as well as executes the event by himself).

- (31) a. *Zyon wa atarasii ie o tateta*  
 John TOP new house ACC build.PST  
 'John had his house built.' OR 'John built a new house.'
- b. *Zyon wa kami o katta*  
 John TOP hair ACC cut.PST  
 'John had his hair cut.' OR 'John cut his hair.'
- c. *Zyon wa tokei o naosita*  
 John TOP watch ACC repair.PST  
 'John repaired his watch.' and 'John had his watch repaired.'

Ikegami claims that the indirect causative reading applies to a much wider range of verbs in Japanese than in English. The possible reasons for this, according to him are: (i) the subject/agent is often omitted in Japanese, and (ii) there might be a noun phrase marked with the topic marker surfacing in the clause, which can potentially be interpreted either as agent or experiencer. He adds that there are at least two pragmatic factors which can be considered as universal in the choice of an indirect reading: (i) authority vested in the agent and (ii) technical difficulty involved in carrying out the event. To illustrate the ‘authority’ argument he cites the following examples.

- (32) a. *John painted the house white.*  
       b. *The President of the University painted the tower brown.*

Comparing (32a), and (32b), (32a) would more likely be interpreted as ‘direct causation’ and (32b) as ‘indirect causation’ given our world knowledge that the president of a university is vested with the authority to get things done through someone else.

Examples (33) and (34) below from Japanese illustrate the two pragmatic factors that boost the chances of an indirect reading arising in a canonical transitive sentence. (33) illustrates the ‘authority’ meaning and (34) the ‘technical difficulty’ meaning.

- (33) *Seihu ga zyuumin o anzenna basyo ni utusi-ta.*  
       government NOM residents ACC safe place LOC move.PST  
       ‘The government moved the residents to a safe place.’
- (34) *Kanozyo ga syuzyutu o sita.*  
       she NOM surgery ACC do.PST  
       ‘She underwent an operation (in addition to ‘She did the operation’).’

Such events are encoded with a canonical transitive construction Marathi and English as well.

- (35) a. *rām-ne navin banglā bāndh-l-ā.*  
       Ram-ERG new bungalow.MSg build-PST-MSg  
       ‘Ram had his new bungalow built.’ Or ‘Ram built a new bungalow.’
- b. *t-yā-ne opreśan kel-a.*  
       he-OBL-ERG surgery.NSg do.PST-NSg  
       ‘He underwent an operation(in addition to ‘He did the operation’).’

## 5.5 Experiencer subject constructions

Certain states of affairs are not instigated or controlled by an entity but rather involve an entity perceived as an experiencer of them. Shibatani (2001a: 312) identifies the following ‘semantic’ types of predicates as ones that crosslinguistically tend to involve an experiencer-subject:

- (36) a. Possession/existence
- b. Psychological states
- c. Physiological states
- d. Visual/auditory perceptions, including the notion of ‘appearance’/‘seeming’
- e. Modal states of necessity and wanting, including the notion of obligation (‘must’)
- f. Modal states of potentiality, including ability and the notion of permission (‘may’)
- g. Uncontrolled events; e.g. forgetting, finding, etc.

Shibatani notes that except for the last type (36g), Japanese may use a non-canonical construction, which he calls the ‘dative subject construction’, to encode such events or states. Illustrative examples of semantic types in (36a) through (36f) from Shibatani (2001a: 312–314, example 39b slightly revised) are given below.

- (37) Possession/Existence
  - a. *Ken ga/wa atama ga ookii.*  
 Ken NOM/TOP head NOM big  
 ‘Ken has a big head.’
  - b. *Ken ni (wa) kodomo ga san-nin iru.*  
 Ken DAT (TOP) child NOM three-person be/exist  
 ‘Ken has three children.’
  - c. *Ken ni (wa) syakkin ga ooi/sukunai.*  
 Ken DAT (TOP) debt (money) NOM many/small in quantity  
 ‘Ken has a large amount of/only a small amount of debt.’
- (38) Psychological states
  - a. *Mami ni (wa) Hata-sensei ga osorosii (sooda).*  
 Mami DAT (TOP) Hata-prof NOM fearful  
 ‘Mami is fearful of Prof. Hata.’
  - b. *Mami ga/wa Ken ga suki da.*  
 Mami NOM/TOP Ken NOM like COP  
 ‘Mami likes Ken.’

## (39) Physiological states

- a. *Taroo ga/wa atama ga itai.*  
 Taro NOM/TOP head NOM hurting  
 'Taro has a headache.'
- b. *Mami ga/wa senaka ga kayui.*  
 Mami NOM/TOP back NOM itching  
 'Mami has itching back.'

## (40) Visual/audio perception

- a. *Ken ni (wa) Huzi-san ga yoku mieru.*  
 Ken DAT (TOP) Fuji-Mt NOM well visible  
 'Ken can see Mt. Fuji well.'
- b. *Mami ni (wa) sono oto ga kikoe-nakat-ta.*  
 Mami NOM/TOP that sound NOM audible-NEG-PST  
 'Mami didn't hear that sound.'

## (41) Necessity/Desiderative states

- a. *Boku ni (wa) okane ga hituyoo da.*  
 I DAT (TOP) money NOM necessity COP  
 'I need money.'
- b. *Boku ga/wa kono hon ga hosii.*  
 I NOM/TOP this book NOM want  
 'I want this book.'
- c. *Boku ga/wa mizu ga nomi-tai.*  
 I NOM/TOP water NOM drink-DESID  
 'I want to drink water.'

## (42) Potentiality/ability

- a. *Ken ni (wa) eigo ga hanas-e-ru.*  
 Ken DAT (TOP) English NOM speak-POTEN-PRES  
 'Ken can speak English.'
- b. *Ken ni (wa) eigo ga dekiru/wakaru.*  
 Ken DAT (TOP) English NOM can do/understand  
 'Ken can do (has command of) English/Ken understands English.'
- c. *Ken ga/wa eigo ga tokui da/nigate da.*  
 Ken NOM/TOP English NOM good at/bad at  
 'Ken is good at/bad at English.'

The constructions above are non-canonical in two ways: (i) they do not involve the canonical *ga-o* case frame as in the major biactant construction in (19) and (ii) they express states rather than activities. On the transitivity of these constructions, however, the opinion of scholars is divided. Kuno (1973) and Shibatani (1977) treat them as transitive arguing that the dative nominal in DAT-NOM structures possesses subject-like behavioral properties such as reflexive binding and subject honorification, like the nominative subject nominal in NOM-ACC case frame structures. Shibatani (1999, 2001a, b) and Shibatani and Pardeshi (2001) argue against the transitive analysis and claim them to be a ‘double subject construction’ involving intransitive predication. Kishimoto (2004) argues against the intransitive analysis advocated by Shibatani (1999, 2001a, b) and Shibatani and Pardeshi (2001). Shibatani and Pardeshi (this volume) offer a critique of Kishimoto (2004).

## 6 Summary and future prospects

In this chapter I have presented a broad overview of issues related to transitivity in Japanese at the lexical/morphological and syntactic/clausal levels drawing on the traditional Japanese-native descriptive approach as well as the modern theoretical and typological approach. At the lexical/morphological level, two central concepts related to transitivity, viz. agency and (lexical) aspect, are discussed. At the syntactic level, four salient non-canonical constructions deviating on the agency parameter are discussed. Through the foregoing discussion I attempted to (i) highlight contributions from Japanese to existing linguistic theories, (ii) identify the characteristics of Japanese in the typological landscape, and (iii) introduce important insights from native Japanese scholarship, which unfortunately remains inaccessible to a wider audience due to the language barrier.

As future prospects, a couple of topics that deserve more comprehensive and rigorous treatment are listed. The first one pertains to the so-called DO vs BECOME typology. Ikegami (1981, 1991) proposes a typology of languages on the basis of what he calls ‘two contrasting orientations in the way in which an extralinguistic event is linguistically expressed (naturally, with a gradience in between) [1991: 289]’. More concretely, Ikegami (1991: 290) proposes the following hypothesis:

There is a contrast between (1) a language which focuses on ‘the human being (especially, one acting as an agent)’ and tends to give linguistic prominence to the notion and (2) a language which tends to suppress the notion of ‘the human being (especially, one acting as an agent),’ even if such a being is involved in the event.

Discussing several linguistic phenomena such as expression of possession, expression of an agent, causative expressions, etc. Ikegami (1991) categorizes English as a DO-language, since the dominant scheme of representation in English is ‘someone DOing something’ giving linguistic prominence to the human being acting as an

agent, and Japanese as a BECOME-language, since the representation preferred in Japanese is in terms of something BECOMing or happening, suppressing the human agent and merging it with the environment (p. 318). Thus, English tends to prefer a transitive expression, while Japanese tends to prefer an intransitive expression for encoding the same extra-linguistic event. As Ikegami himself points out, this is a general tendency and not an absolute universal. A typology similar in spirit to that of Ikegami, is presented in Hinds (1986). Hinds shows that in situations where English prefers transitive constructions, Japanese prefers intransitive constructions. Hinds calls English a “person-focused” language, and Japanese a “situation-focused” language. In order to test the empirical validity of the DO/person-focus vs. BECOME/situation-focus typology, systematic contrastive studies between Japanese and the languages of the world are necessary.

Cancellation of results in accomplishment verbs is another topic that needs comprehensive treatment. Transitive verbs with causative semantics (accomplishment) such as *korosu* ‘kill’, and *kowasu* ‘destroy/break’ entail a proposition implying the occurrence of a ‘caused event’ viz. the object undergoing a change of state which is believed to be triggered as the result of a ‘causing event’ instigated by the agent-subject. For example, in Japanese a sentence featuring the transitive verb *korosu* ‘kill’, as in *Kare wa kanozō o korosita* ‘He killed her’, entails the proposition *Kanozō ga sinda* ‘She died’. Ikegami (1985) compares what he refers to as ‘directed action verbs’ in Japanese and English from the vantage point of cancellation of entailment of a proposition expressing the occurrence of a caused event. Some verbs behave alike in this respect, both in Japanese as well as English, e.g. kill/die, while others, such as burn (tr)/burn (intr) do not.

(43) \**John killed Mary, but Mary didn’t die.*

\**Zyon wa Mearii o korosi-ta keredo, Mearii wa sin-ana-katta.*  
 John TOP Mary ACC kill-PST but Marry TOP die-NEG-PST  
 ‘John killed Mary, but Mary didn’t die.’

(44) \**I burned it, but it did not burn.*

*Moyasi-ta keredo moe-na-katta.*  
 burn (tr)-PST but burn (intr)-NEG-PST  
 ‘I burned it, but it did not burn.’

To test the validity of Ikegami’s hypothesis, Miyajima (1985) carried out a large-scale questionnaire-based study on goal-oriented transitive verbs in Japanese and demonstrated that these verbs show a cline in terms of the degree to which they entertain the interpretation of cancellation of entailment of a proposition expressing the occurrence of a caused event. Cancellation of result entailment in Japanese is still a hotly debated topic in the research literature (see Kageyama 1996; Alam-Sasaki 2001;

Tsujimura 2003; Sato 2005; Aoki and Nakatani 2013a, b; Kato this volume; among others), wherein varying explanations for why entailment cancellation is permitted in Japanese are offered. These explanations need to be tested through comparative studies of Japanese and the languages of the world.

Further, there are many crosslinguistic studies of Japanese and English in which gross generalizations have been made that Japanese is radically different from other languages or even a unique language. In order to position Japanese in a larger typological landscape, finer-grained contrastive studies of Japanese and languages of the world on the outstanding issues listed above are necessary. The studies reported in Nishimitsu and Pardeshi (eds.) (2010) and Pardeshi, Kiryu and Narrog (eds.) (2015) are small steps in this direction.

Acquisition of the transitive/intransitive distinction and the case marking of verb arguments in general is a challenging task for learners of Japanese, especially for those whose L1 makes no formal distinction between transitive and intransitive verbs. A comprehensive database of errors made by Japanese as foreign language learners in acquiring the argument structure of transitive and intransitive verbs would be a useful resource to understand how mapping is achieved between semantic roles and syntactic functions. Also, developing a freely accessible comprehensive database of predicates in Japanese with their argument structure, including semantic roles, case marking, and illustrative examples would be a valuable resource for the teaching as well as the learning of Japanese as a foreign language.

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## 2 Non-canonical constructions in Japanese: A crosslinguistic perspective

### 1 Introduction

In canonical constructions featuring transitive and intransitive predicates, Japanese displays nominative-accusative alignment (A=S≠O). As shown in (1) below, subjects of transitive predicates (A) and intransitive predicates (S) are marked with the nominative case marker *ga*, in contrast to objects of transitive predicates (O or P), marked by the accusative marker *o*. However, Japanese also has constructions that deviate from the canonical nominative-accusative alignment in which, while the sentences contain two obligatory nominal arguments, unlike canonical intransitive sentences (NOM alone) and like canonical transitive sentences (NOM-ACC), they are marked either as NOM-NOM or DAT-NOM, as in (2) below.

(1) Canonical constructions

a. Intransitive

*To ga aita.*

door NOM opened

‘The door opened.’

b. Transitive

*Ken ga to o aketa.*

Ken NOM door ACC opened

‘Ken opened the door.’

(2) Non-canonical constructions

a. NOM-NOM construction

*Ken ga Hana ga suki da.*

Ken NOM Hana NOM like COP

‘Ken likes Hana.’

b. DAT-NOM construction

*Ken ni eigo ga waku (koto)*<sup>1</sup>

Ken DAT English NOM understand (that)

‘(That) Ken understands English.’

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<sup>1</sup> *koto* nominalization forms reveal the basic case marking pattern since nominalized structures do not readily admit topic marking.

Such non-canonical constructions (NCCs hereafter), which deviate from both canonical intransitive and canonical transitive sentence patterns, are widely found among areally and genetically distinct languages around the world, ranging from South Asian languages (e.g. Verma (ed.) 1976; Verma and Mohanan (eds.) 1990; Bhaskararao and Subbarao (eds.) 2004, among others) to Georgian (e.g. Harris 1984), and from Japanese (e.g. Kuno 1973; Shibatani 1978, 1999, 2000, 2001a, 2001b; Shibatani and Pardeshi 2001, to name a few) to Italian (e.g. Perlmutter 1984) and Quechua (e.g. Jake 1985). NCCs are also debated in the typological literature (e.g. Aikhenvald, Dixon, and Onishi (eds.) 2001), where NCCs are variously referred to as non-canonical constructions, non-nominative subject constructions, dative subject constructions, experiencer subject constructions, quirky/oblique subject constructions, etc.

One of the contentious issues related to NCCs pertains to their transitivity: Are they transitive or intransitive? The fact is that two arguments are generally required in NCCs and thus they are transitive if the notion of transitivity is understood in terms of the number of nominal arguments required in completing the relevant predications. Our question, however, concerns the notion of syntactic transitivity, i.e. whether NCCs are syntactically transitive with a syntactic subject and a (direct) object like canonical transitive sentences, despite the difference in the case marking patterns. Most of the studies in the 1970's and 80's mentioned above share the basic assumption that NCCs are transitive (at least at some level of representation, such as in Relational Grammar treatments). However, in Shibatani's works around the turn of the 21st century (Shibatani 1999, 2000, 2001a, 2001b; Shibatani and Pardeshi 2001), this assumption has been challenged and an alternative novel account is proposed, namely that NCCs are **variants** of double subject constructions widely attested among Asian languages such as Japanese, Chinese, and Indonesian, and that they are structurally and relationally distinct from both canonical transitive constructions and straightforward intransitive constructions. Against this backdrop, the present chapter provides a bird's-eye view of the past analyses and controversies surrounding the transitivity of NCCs in general and those in Japanese in particular.

The chapter is organized as follows. Section 2 offers a detailed characterization of Japanese NCCs in comparison to their canonical construction (CCs hereafter) counterparts. Following this, in Section 3, the semantics and syntax of Japanese NCCs is discussed from a wider typological perspective. Section 4 discusses the contentious issue, namely, whether NCCs are transitive or intransitive, summarizing previous works, including our response to Kishimoto (2004) and (2016), which attempt a challenge to Shibatani's analysis of NCCs as species of double subject constructions. Section 5 presents crosslinguistic evidence supporting the double subject analysis of NCCs, which recognizes a large subject and a small subject in a single sentence. Data from a large number of South Asian languages are mobilized in this section. The discussions below are largely drawn from our previous works on this subject, especially from Shibatani (2000) and Shibatani and Pardeshi (2001). Finally, a brief summary is provided in Section 6.



## 2 Characteristics of NCCs in Japanese

The first characteristic of NCCs in Japanese and elsewhere is that they generally involve stative or intransitive predicates denoting uncontrollable states of affairs. Like ordinary intransitive sentences with a stative predicate, NCCs also sound more natural with a topic when they occur as independent sentences, as shown in the comparison between the *ga/ni*-marked and *wa*-marked versions below.

- (3) a. *Mami ga/wa Ken ga suki da.*  
 Mami NOM/TOP Ken NOM like COP  
 ‘Mami likes Ken.’
- b. *Mami ni (wa) eigo ga hanaseru.*  
 Mami DAT (TOP) English NOM can.speak  
 ‘Mami can speak English.’

There are actually quite a number of constructions in Japanese that deviate from the canonical patterns illustrated in (1). One type, shown below, contains a second argument (O) marked with a non-accusative case (see Kishimoto, Kageyama, and Sasaki (2015) on the various valency patterns found in Japanese).

- (4) a. *Ken ga Mami ni at-ta.*  
 Ken NOM Mami DAT meet-PST  
 ‘Ken met Mami.’
- b. *Ken ga Mami to at-ta.*  
 Ken NOM Mami COM meet-PST  
 ‘Ken met with Mami.’
- c. *Ken ga Zyun ni kat-ta.*  
 Ken NOM Jun DAT win-PST  
 ‘Ken beat/prevailed over Jun.’
- d. *Zyun ga Ken ni sitagat-ta.*  
 Jun NOM Ken DAT obey-PST  
 ‘Jun obeyed Ken.’
- e. *Ken ga isya ni nat-ta.*  
 Ken NOM doctor DAT become-PST  
 ‘Ken became a doctor.’
- f. *Ken ga ame ni nure-ta.*  
 Ken NOM rain DAT get.wet-PST  
 ‘Ken got wet in the rain.’

- g. *Ken ga sake ni yot-ta.*  
 Ken NOM sake DAT get.drunk-PST  
 ‘Ken got drunk with sake.’
- h. *Ken ga hasika ni kakat-ta.*  
 Ken NOM measles DAT contract.PST  
 ‘Ken contracted measles.’

All these constructions, similar to NCCs, involve predicates of lower transitivity. Indeed, when these verbs are passivized, they all bring about the nuance of adversity befalling the passive subject, which is characteristic of the passives of verbs of weak transitivity including syntactically intransitive verbs. Another characteristic that these NCCs share is the use of the dative particle *ni* for one of their arguments.<sup>2</sup>

The dative particle *ni*, as the name suggests, prototypically marks a goal nominal or the indirect object of a ditransitive clause. It also marks the goal of motion verbs (5), the location of stative verbs (6), the source of transfer verbs (7), as well as the agent in a passive clause (8), and the causee in a causative, (9).

- (5) a. *Ken ga Tookyoo ni it-ta.*  
 Ken NOM Tokyo GOAL go-PST  
 ‘Ken went to Tokyo.’
- b. *Ken ga ie ni tui-ta.*  
 Ken NOM home GOAL arrive-PST  
 ‘Ken arrived home.’
- (6) a. *Tukue no ue ni hon ga aru.*  
 Desk GEN top LOC book NOM be/exist  
 ‘There is a book on top of the desk.’
- b. *Ken ga Tookyoo ni sunde iru.*  
 Ken NOM Tokyo LOC live be  
 ‘Ken lives in Tokyo.’
- (7) a. *Ken ga Mami ni hon o morat-ta.*  
 Ken NOM Mami SOURCE book ACC receive-PST  
 Ken received a book from Mami.’
- b. *Ken ga Hata-sensei ni eigo o osowat-ta.*  
 Ken NOM Hata-prof SOURCE English ACC learn-PST  
 ‘Ken learned English from Prof. Hata.’

<sup>2</sup> See Jacobsen 1992 and Jacobsen 2017 on the nature of transitivity of these and other predicates in Japanese. Jacobsen’s work, however, does not dwell on the transitivity issue of NCCs dealt with in this chapter.

- (8) a. *Ken ga Mami ni naka-re-ta.*  
 Ken NOM Mami AGENT cry-PASS-PST  
 'Ken was adversely affected by Mami's crying.'
- b. *Ken ga hahaoya ni sikara-re-ta.*  
 Ken NOM mother AGENT scold-PASS-PST  
 'Ken was scolded by (his) mother.'
- (9) a. *Ken ga Zyun ni uti e kaer-ase-ta.*  
 Ken NOM Jun CAUSEE house GOAL return-CAUS-PST  
 'Ken had Jun go home.'
- b. *Ken ga Zyun ni hon o yom-ase-ta.*  
 Ken NOM Jun CAUSEE book ACC read-CAUS-PST  
 'Ken made Jun read a book.'

The different uses of the particle *ni* above have been tentatively labelled on the basis of the semantic role each NP plays. A real challenge would be to offer a principled, unified account for these diverse uses of *ni*, but for which we presently have no ready answer and will leave this challenge for future study. We have dwelt on the particle *ni* here precisely because it is the particle that figures most importantly in one type of NCC in Japanese and its equivalents occur widely in NCCs across different languages, as seen below.

### 3 Semantics and syntax of Japanese NCCs from a crosslinguistic perspective

It is not only Japanese in which the dative case is employed in NCCs. In a very large number of languages, the case form that marks the recipient (or the indirect object) of a ditransitive clause, viz. the dative, appears as one of the arguments of an NCC, as the following examples from a diverse array of languages show.

- (10) *Aaja ma-laaii jaaDo laag-yo.*  
 Today I-DAT cold feel-MASC  
 'I feel it cold today.' (Nepali; Clark 1963: 17)
- (11) *Use gussaa aayaa.*  
 he.DAT anger came  
 'He became angry.' (Hindi; adapted from Kachru 1990: 63)

- (12) *Mare jAvuu joie.*  
 I-DAT go needed  
 'I want/need to go.' (Gujarati; Lambert 1971)
- (13) *Raam-laa jarman.bhaashaa bol-taa ye-t-e.*  
 Ram-DAT German.language.F speak-PTCPL come-PRS-F  
 'Ram can speak German.' (Marathi)
- (14) *Avanige jvara bantu.*  
 he.DAT fever came  
 'He got a fever.' (Kannada; Sridhar 1976: 132)
- (15) *Avanukku muham malarndadu.*  
 he.DAT face bloom.PST.it  
 'His face bloomed; he felt pleasure.' (Tamil; Lindholm 1976: 175)
- (16) *NiNaL-kkA pook-aam.*  
 you-DAT go-may  
 'You may go.' (Malayalam; Jayaseelan 1990: 279)
- (17) *Ji-ta dhebaa yawa maai.*  
 I-DAT money much need  
 'I need a lot of money.' (Newar; Kazuyuki Kiryu, p.c.)
- (18) *Amake Aiyā ora hiju ketAna.*  
 you.DAT I house come have.to  
 'You have to come to my house.' (Mundari; Abbi 1990: 259)
- (19) *MaTA lamaya-wA penAwa.*  
 I-DAT child-ACC see.PRS  
 'I see the child.' (Sinhala; Kumara Henadeerage, p.c.)
- (20) *MaTA duwek innAwa.*  
 I.DAT daughter be.ANIMATE.PRS  
 'I have a daughter.' (Sinhala)
- (21) *Me gusta la cerveza.*  
 I.DAT like the beer  
 'I like beer.' (Spanish)
- (22) *Gelas ugvars Nino.*  
 Gela.DAT love.3SG Nino.NOM  
 'Gela loves Nino.' (Georgian)

- (23) *Ban-a para lâzm.*  
 I-DAT money need  
 ‘I need money.’ (Turkish)

- (24) *Mne rabotaelsja.*  
 I.DAT work.REFL  
 ‘I can work.’ (Russian)

As the examples above illustrate, those predicates calling for non-canonical constructions center around the following semantic fields:

- (25) a. Possession/Existence (20)  
 b. Psychological states (11, 15, 21)  
 c. Physiological states (10, 14)  
 d. Visual/auditory perceptions, including the notion of ‘appearance’ / ‘seeming’ (19, 22)  
 e. Modal states of necessity, including the notion of obligation (‘must’) (17, 18, 23)  
 f. Modal states of potentiality, including ability and the notion of permission ‘may’ (13, 16, 24)  
 g. Desiderative states (12)

A given language may include some verbs in other semantic domains related to those above, but the Japanese verbs calling for non-canonical constructions typically fall into these seven semantic domains (see also Haspelmath 2001). Although use of the dative case for marking the possessor/experiencer nominal is prevalent across languages, rarely does a language show uniform dative marking throughout these predicates, and Japanese is no exception. Japanese NCCs divide themselves into two types: the NOM-NOM type and the DAT-NOM type.

- (26) Possession/Existence
- a. *Ken ga/wa atama ga ookii.*  
 Ken NOM/TOP head NOM big  
 ‘Ken has a big head.’
- b. *Ken ni (wa) kodomo ga san-nin iru.*  
 Ken DAT (TOP) child NOM three-person be/exist  
 ‘Ken has three children.’

- c. *Ken ni (wa) syakkin ga ooi/sukunai.*  
 Ken DAT (TOP) debt (money) NOM many/small.in.quantity  
 'Ken has a large amount /only a small amount of debts.'

## (27) Psychological states

- a. *Boku ni (wa) Hata-sensei ga osorosii.*  
 I DAT (TOP) Hata-prof NOM fearful  
 'I am fearful of Prof. Hata.'
- b. *Mami ga/wa Ken ga suki da.*  
 Mami NOM/TOP Ken NOM like COP  
 'Mami likes Ken.'

## (28) Physiological states

- a. *Boku ga/wa atama ga itai.*  
 Taro NOM/TOP head NOM hurting  
 'I have a headache.'
- b. *Watasi ga/wa asi ga tumetai.*  
 I NOM/TOP foot NOM cold  
 'I feel my feet are cold.'

## (29) Visual/audio perceptions

- a. *Ken ni (wa) Huzi-san ga yoku mieru.*  
 Ken DAT (TOP) Fuji-Mt. NOM well visible  
 'Ken can see Mt. Fuji well.'
- b. *Mami ni (wa) sono oto ga kikoe-nakat-ta.*  
 Mami DAT (TOP) that sound NOM audible-NEG-PST  
 'Mami didn't hear that sound.'

## (30) Necessity

- a. *Boku ni (wa) okane ga hituyoo da.*  
 I DAT (TOP) money NOM necessity COP  
 'I need money.'
- b. *Boku ni (wa) Ken ni au hituyoo ga aru.*  
 I DAT (TOP) Ken GOAL meet necessity NOM be/exist  
 '(lit.) I have the need of meeting Ken/I need to meet Ken.'

## (31) Potentiality/ability

- a. *Ken ni (wa) eigo ga hanas-e-ru.*  
 Ken DAT (TOP) English NOM speak-POTEN-PRS  
 'Ken can speak English.'

- b. *Ken ni (wa) eigo ga dekiru/wakaru.*  
 Ken DAT (TOP) English NOM can.do/understand  
 'Ken can do (has command of) English/Ken understands English.'
- c. *Ken ni (wa) eigo o hanasu koto ga kanoo da.*  
 Ken DAT (TOP) English ACC speak that NOM possible COP  
 'It is possible for Ken to speak English.'
- d. *Ken ga/wa eigo ga tokui/nigate da.*  
 Ken NOM/TOP English NOM good.at/bad.at COP  
 'Ken is good at/bad at English.'

(32) Desiderative states

- a. *Boku ga/wa kono hon ga hosii.*  
 I NOM/TOP this book NOM want  
 'I want this book.'
- b. *Boku ga/wa mizu ga nomi-tai.*  
 I NOM/TOP water NOM drink-DESI  
 'I want to drink water.'

The predicates involved in non-canonical case marking patterns span three major Japanese predicate types, namely verbs (e.g. *aru* 'be/exist', *wakaru* 'understand', *hanas-e-ru* 'can speak'), adjectives (e.g. *hosii* 'want', *nomi-tai* 'want to drink'), and adjectival-nominals (e.g. *kanoo da* 'possible', *tokui da* 'good at'). They represent both lexical (e.g. *wakaru* 'understand', *hosii* 'want') and derived forms (e.g. *hanas-e-ru* 'can speak', *nomi-tai* 'want to drink'). Owing to the productive derivations of potential and desiderative forms, non-canonical constructions are very productive in Japanese. Indeed, since possessions, as well as mental and physiological conditions, represent such personal states, these constructions are indeed prevalent forms of expressions, and they deserve much closer attention than hitherto accorded in both teaching Japanese as a foreign language and linguistic analysis.

Our syntactic analysis of NCCs as variants of double subject constructions (see Section 4.3) is based on the observation that NCC predicates typically denote states that obtain within a domain of personal experiences. We believe it is this semantic characteristic of NCCs that leads to the specific grammatical coding of them, namely as a double subject construction containing a large subject that sets a personal domain in which the said physiological or mental state obtains. Unlike objectively conceptualized states of affairs denoted by ordinary stative predicates such as *Sora ga/wa aoi* 'The sky is blue' and *Ano yama ga/wa kirei da* 'That mountain is beautiful', physio-psychological states of affairs are conceived as obtaining only within a personal domain. Indeed, some experiences are accessible so privately that only a first-person (speaker) subject is permitted in Japanese. Thus, (27a), (28),

and (30) would allow only a first-person subject, and some others such as (27b) and (29) with a third-person subject are highly empathic expressions in which the speaker is assuming the perspective of the subject referent. These expressions accordingly characteristically occur without the specification of the domain of experience and simply as *Atama ga itai* ‘The head hurts’, *Kono hon ga hosii* ‘This book is desired’, unlike (28a) and (32a), which are as redundant as expressions like *Kono hon o boku ni kure* ‘Give me this book’ and *Ken ga koko ni kita* ‘Ken came here’, where deictic information is redundantly expressed by the predicates and the locational nominal expressions.

This stative character of NCCs distinguishes these predicates from those activity predicates calling for the NOM-DAT/COM pattern discussed in Section 2. Another distinguishing characteristic that sets these two types of NCC apart is word order. Whereas the activity verbs discussed in Section 2 assume the NOM-DAT/COM word order as unmarked, the stative predicates discussed in this section all select the NOM-NOM and DAT-NOM as unmarked word orders. While the term ‘dative subject construction’ used in the literature singles out the DAT-NOM pattern, we consider the NOM-NOM constructions exemplified above to be variants of the dative subject construction—or vice versa—and argue for a unified treatment of them as variants of double subject constructions, in which the dative nominal of the DAT-NOM construction and the first nominative nominal of the NOM-NOM construction function as a large subject that sets out a domain within which a stative predication obtains (see Section 4.3 below).

### 3.1 Alternate case frames

As in many other languages, the type of NCCs in Japanese under discussion exhibits alternate case patterns. A number of the DAT-NOM predicates may occur in the NOM-NOM frame, as shown below, whereas the NOM-NOM predicates cannot occur in the DAT-NOM frame.

- (33) a. [*Ken ni/ga eigo ga waku*] *koto*  
 Ken DAT/NOM English NOM understand that  
 ‘that [Ken understands English]’  
 b. [*Mami ni/ga Eigo ga hanas-e-ru*] *koto*  
 Mami DAT/NOM English NOM speak-POTEN-PRS that  
 ‘that [Mami can speak English]’  
 c. [*Zyun ni/ga okane ga hituyoo na*] *koto*  
 Jun DAT/NOM money NOM necessary COP that  
 ‘that [Jun needs money]’



- (34) a. [*Ken ga/\*ni atama ga ookii*] *koto*  
 Ken NOM/\*DAT head NOM big that  
 ‘that [Ken has a big head]’
- b. [*Mami ga/\*ni atama ga itai*] *koto*  
 Mami NOM/\*DAT head NOM hurting that  
 ‘that [Mami has a headache]’
- c. [*boku ga/\*ni ano hon ga hosii*] *koto*  
 I NOM/\*DAT that book NOM want that  
 ‘that [I want that book]’
- d. [*Ken ga/\*ni Mami ga suki na*] *koto*  
 Ken NOM/\*DAT Mami NOM like COP that  
 ‘that [Ken likes Mami]’

Which predicates take the basic DAT-NOM pattern and which ones take the NOM-NOM pattern, why there is this distinction, and what the meaning distinction is between the alternate case frames are all interesting and challenging questions, some of which we will take up in the following discussion. Another alternate case frame some of these NCCs enter is the NOM-ACC transitive frame. As pointed out in the preceding section, predicates calling for NCCs are of two types: lexical and derived. Derived types involving transitive roots may show either the DAT/NOM-NOM pattern or the NOM-ACC pattern, maintaining the case pattern of the transitive roots, and avoiding the DAT-ACC pattern:

- (35) a. *Mami ni/ga eigo ga hanas-e-ru.*  
 Mami DAT/NOM English NOM speak-POTEN-PRS  
 ‘Mami can speak English.’
- b. *Mami ga eigo o hanas-e-ru.*  
 Mami NOM English ACC speak-POTEN-PRS  
 ‘Mami can speak English.’
- c. \**Mami ni eigo o hanas-e-ru.*  
 Mami DAT English ACC speak-POTEN-PRS  
 ‘Mami can speak English.’
- (36) a. *Boku ga/\*ni mizu ga nomi-ta-i.*  
 I NOM/\*DAT water NOM drink-DESID-PRS  
 ‘I want to drink water.’
- b. *Boku ga mizu o nomi-ta-i.*  
 I NOM water ACC drink-DESID-PRS  
 ‘I want to drink water.’

When intransitive verb roots are involved, the general pattern is simply NOM-PRED for both potential and desiderative derivations:<sup>3</sup>

- (37) *Ken ga/\*ni oyog-e-ru.*  
 Ken NOM/\*DAT swim-POTEN-PRS  
 ‘Ken can swim.’
- (38) *Mami ga oyogi-ta-i.*  
 Mami NOM swim-DESID-PRS  
 ‘Mami wants to swim.’

Among the underived predicates, the NOM-NOM predicate *suki da* ‘like’ allows the NOM-ACC pattern rather freely:

- (39) [*Ken ga Mami ga/o suki na*] *koto*  
 Ken NOM Mami NOM/ACC like COP that  
 ‘that [Ken likes Mami]’

It is hard to pinpoint a meaning difference between DAT/NOM-NOM forms and the corresponding NOM-ACC forms. It appears that the canonical transitive NOM-ACC pattern reflects the speaker’s conceptualization of the experience as involving higher transitivity. Supporting evidence for this is that when verbal roots of high transitivity are involved, the NOM-ACC pattern is either preferred or the only option.

- (40) a. *Boku ga/wa kono hon ???ga/ sute-tai.*  
 I NOM/TOP this book NOM/ACC throw.away-DESID  
 ‘I want to throw away this book.’
- b. *Boku ga/wa Ken ???ga/o naguri-tai.*  
 I NOM/TOP Ken NOM/ACC hit-DESID  
 ‘I want to hit Ken.’
- c. *Boku ga/wa kono baketu ???ga/o kettobasi-tai.*  
 I NOM/TOP this bucket NOM/ACC kick.away-DESID  
 ‘I want to kick this bucket away.’

In the case of potential derivatives, the difference being noted here is not detectable, allowing both the DAT/NOM-NOM pattern and the NOM-ACC pattern with all activity verbal roots. The lexical form, *suki da* ‘like,’ on the other hand, prefers a

<sup>3</sup> But in contrastive environment, DET-PRED pattern is possible: *Onazi suieikyoo-situ o deta noni, Ken ni ogete, Mami ni oyogenai no wa husigi da* ‘it is strange that Ken can swim and Mami cannot swim despite they graduated from the same swimming school’.

human referent for the NOM-ACC pattern, indicating that the degree of transitivity may be at work here too.

- (41) a. *Ken ga/wa Mami ga/o suki da.*  
           Ken NOM/TOP Mami NOM/ACC like COP  
           ‘Ken likes Mami.’
- b. *Kodomo wa hikooki ga/???o suki da.*  
           children TOP airplane NOM/ACC like COP  
           ‘Children like airplanes.’

There is, however, a great deal of individual variation with possibilities for alternate encoding, and some speakers appear to accept the accusative version of (41b), for example, quite readily (see Shibatani 1978 for relevant discussion). And, unlike the alternate expressions based on the verb-adjective (or verb-adjectival nominal) contrast to be discussed in Section 4.2, a semantic difference between the alternate forms is hard to pinpoint.

## 4 Transitivity of NCCs: Are they transitive or intransitive?

Whether NCCs are syntactically transitive or intransitive is a contentious issue, which has been hotly debated in the literature on Japanese as well as other languages. Scholars are divided into two camps: (i) those advocating a view that NCCs are transitive (Kuno 1973; Shibatani 1978; Gair 1990; Masica 1991; Kishimoto 2004 and 2016, to name a few), and (ii) those claiming them to be intransitive (Shibatani 1999, 2000, 2001a, 2001b; Pandharipande 1990; Shibatani and Pardeshi 2001; Jayaseelan 2004; Amritavalli 2004, among others). The debate related to Japanese NCCs is summarized below in chronological order.

### 4.1 Traditional Analyses

In the older tradition, the Japanese grammarians treated NCCs from a morphological point of view, typically concentrating only on the NOM2-PRED portion of the full form, viz. DAT/NOM1-NOM2-PRED, because the DAT/NOM1 is most often topicalized or unencoded (see below). Since NOM2 is marked by the particle *ga*, indicating the subject of both transitive and intransitive sentences, it was assumed that this nominal was a subject (e.g. Martin 1962).

- (42) a. *Eiga ga suki da.*  
 movies NOM like COP  
 ‘(I) like movies.’
- b. [*eiga ga suki da*]  
 SUBJ PRED

Among the traditional grammarians, Tokieda (1950) offered a non-conventional treatment. Recognizing the fact that the NOM2 of the NCC can be construed as an object (goal) toward which subjective feelings are directed, Tokieda set up a category of ‘objective’ function distinct from subject and object. Thus, for the full non-canonical form, Tokieda’s analysis would assign the following grammatical functions:

- (43) a. *Boku ga mizu ga hosii*  
 I NOM water NOM want  
 ‘I want water.’
- b. [*boku ga mizu ga hosii*]  
 SUBJ OBJECTIVE PRED

Arguing against the traditional analysis in (42), Kuno (1973) offers a straightforward transitive analysis for NCCs of the form of (44).

- (44) a. *Boku ga eiga ga suki da*  
 I NOM movies NOM like COP  
 ‘I like movies.’
- b. [*boku ga eiga ga suki da*]  
 SUBJ OBJ PRED

Kuno’s argument against the analysis in (42b) is that a sentence like (42a) is elliptical, and that the full sentence in the form of (44a) contains a real subject. Kuno (1973: 80) tells us that if the experiencer in (44a) is the subject of this sentence, then the second NP cannot be also one. He contrasts a double nominative sentence like (44a) with a double subject construction of the following form:

- (45) *Bunmeikoku ga dansei no heikin-zyumyoo ga mizikai*  
 civilized.countries NOM male GEN average-life.span NOM short  
 ‘It is the civilized countries that a male’s average life-span is short in.’

Kuno’s point is that a double subject construction like this yields a full (non-elliptical) sentence even if the first nominative nominal is deleted. But this is not the case with the NCCs, as the following contrast shows.

- (46) a. *Okane ga hosii.*  
 money NOM want  
 ‘(I) want money.’
- b. *Dansei no heikin-zyumyoo ga mizikai.*  
 male GEN average-life.span NOM short  
 ‘It is a male’s average life-span that is short.’

In (46a), the speaker (“I”) is implied, whereas there is no additional information implied in the case of (46b).

Kuno’s analysis of NCCs as transitive gained some support from Shibatani’s (1977) demonstration that the dative nominal of the DAT-NOM structure does possess certain subject properties such as binding the reflexive *zibun* ‘self,’ as well as triggering the subject honorification process (see below). Indeed, the transitive analysis is in line with researchers of the languages of South Asia such as Hindi and Sinhala, where NCCs paralleling those of Japanese have received a transitive analysis similar to Kuno’s (see Shibatani and Pardeshi 2001 for details).

One point to keep in mind in pursuing arguments against a transitive analysis is that, while Kuno distinguishes double subject constructions such as (45) and (47) below from NCCs of the DAT/NOM-NOM type, we treat them all alike in the proposed analysis below.

- (47) Kuno (1973)
- a. *Ken ga otoosan ga sin-da.* (Double subject construction)  
 Ken NOM father NOM die-PST  
 ‘It is Ken whose father died.’
- b. *Ken ga eiga ga suki da.* (Transitive Construction)  
 Ken NOM movies NOM like COP  
 ‘Ken likes movies.’
- c. *Ken ni eigo ga wakar-u.* (Transitive construction)  
 Ken DAT English NOM understand-PRS  
 ‘Ken understands English.’

Indeed, Kuno’s argument based on the elliptical nature of (42a) and (46a) loses force when we realize that a double subject construction like (47a) can also be elliptical without the first nominative nominal, as seen below:

- (48) *Otoosan ga sin-da.*  
 father NOM die-PST  
 ‘A father died.’

In order for this expression to be complete, *otoosan* ‘father’ must be “determined” either by supplying the possessor nominal, e.g. *Ken no* ‘Ken of,’ or by associating it with another nominative in the double subject construction, as in (47a). In the case of physiological states involving body parts the double subject construction is the only option.

- (49) a. *Atama ga itai.*  
           head   NOM   hurting  
           ‘A head is hurting.’
- b. \**Boku no atama ga itai.*  
           I       GEN head   NOM   hurting  
           ‘My head hurts.’
- c. *Boku ga/wa atama ga itai.*  
           I       NOM/TOP head   NOM   hurting  
           ‘I am hurting in the head/I have a headache.’

(49a) is as elliptical as (42a), (46a), and (48). Since only the speaker (“I”) has direct access to a mental state, predicates such as *itai* ‘hurting’ and *hosii* ‘desirable’ can only have a first person experiencer – hence the ungrammaticality of (49b). On the other hand, one can claim that (46a), (48), and (49a) are all equally complete sentences, but they are only so when uttered by a first person in reference to himself. Our analysis below capitalizes on this kind of dependency that the NCCs in general exhibit.

## 4.2 Transitive and intransitive predication

As pointed out in the beginning, those predicates that enter into NCCs in Japanese are all stative, and the majority of them are adjectives and adjectival nominals – except for the potential derivatives involving the verbal endings *-(r)areru* and *-eru*, which turn activity verbs into statives. Indeed, in many other languages, expressions that are couched in non-canonical frames typically involve intransitive, rather than transitive verbs; when transitive verbs are involved they tend to have a metaphoric character, as e.g. the notion of being hungry expressed as ‘hunger strikes’ in many languages of South Asia (see Shibatani and Pardeshi 2001).

In Japanese, many adjectives and adjectival nominals calling for NCCs have corresponding verbs, most of which are transitive. In (50) below, most verbs enter into the canonical transitive case frame NOM-ACC, while the corresponding adjectives and adjectival nominals call for the non-canonical NOM/DAT-NOM frame, as shown in (51) through (53).

(50) Verbs                      Adjectives

<i>nikumu</i>	<i>nikui</i>	‘hate(ful)’
<i>natukasimu</i>	<i>natukasii</i>	‘long for’
<i>sitasimu</i>	<i>sitasii</i>	‘fraternize/to be familiar’
<i>kanasimu</i>	<i>kanasii</i>	‘sad’
<i>tanosimu</i>	<i>tanosii</i>	‘enjoy’
<i>ayasimu</i>	<i>ayasii</i>	‘suspect/suspicious’
<i>itamu</i>	<i>itai</i>	‘hurt’
<i>yurumu</i>	<i>yurui</i>	‘slack(en)’
<i>netamu</i>	<i>netamasii</i>	‘to be jealous’
<i>hossuru</i>	<i>hosii</i>	‘want’

Verbs                      Adjectival-nominals

<i>kirau</i>	<i>kirai da</i>	‘dislike’
<i>suku</i>	<i>suki da</i>	‘like’

- (51) a. *Ken ga/wa Zyun o nikumu.*  
Ken NOM/TOP Jun ACC hate (verb)  
‘Ken hates Jun.’
- b. *Ken ga/wa Jun ga nikui rasii.*  
Ken NOM/TOP Jun NOM hateful (adjective) seem  
‘It seems that to Ken, Jun is hateful.’
- (52) a. *Mami ga/wa Hata-sensei o natukasimu.*  
Mami NOM/TOP Hata-prof ACC long.for (verb)  
‘Mami longs for Prof. Kata.’
- b. *Mami ni (wa) Hata-sensei ga natukasii.*  
Mami DAT (TOP) Hata-prof NOM longing (adjective)  
‘Mami longs for Prof. Hata.’
- (53) a. *Mami ga/wa Ken o kirau.*  
Mami NOM/TOP Ken ACC dislike (verb)  
‘Mami dislikes Ken.’
- b. *Mami ga/wa Ken ga kirai da.*  
Mami NOM/TOP Ken NOM dislike COP (adjectival nominal)  
‘Mami dislikes Ken.’

While in many other languages a contrast is seen in terms of the presence or absence of volition/control between a transitive expression and a corresponding dative subject construction (or its variant) (see below), a possible meaning difference





- b. *kirai na hito*<sup>4</sup>  
 disliking COP person  
 ‘a person inspiring dislike’
- (57) a. *natukasimu hito*  
 long.for person  
 ‘a longing person/a person who longs for something’
- b. *natukasii hito*  
 long.for person  
 ‘a person inspiring longing’

The structural difference shown between the two types of predication in the diagrammatic representations in (54) also captures the difference in conceptualization involved with each of the relevant predicates. The structure (54a) represents conceptualization of a mental activity as an action similar to regular transitive activity verbs. The verb *nikumu* ‘to hate,’ for example, represents a mental state; however, the verbal form allows this state of affairs to be framed as a transitive event similar to other transitive activities. It is a way of describing a state as if it were a controllable activity. The adjectival (and adjectival nominal) predication captured in (54b), on the other hand, describes a property of an individual or an object in terms of a stative predicate. The construction also involves another individual who is related to this state. The nature of this relationship will be explicated in the next section, but the point to be made here is that this representation – (54b) – makes it clear that, unlike a transitive subject nominal, the nominal representing the individual involved – *Ken ga* in (54b) – is not a direct argument of the predicate, and hence it has no direct control over the state of affairs expressed by the clausal predicate.

It is this difference between transitive and intransitive conceptualizations that figures importantly in some languages where a clear semantic opposition obtains between the canonical transitive expression and the corresponding NCC in terms of the presence or absence of volition/control. Compare the following Sinhala forms, for example, where (58a) below is cast in the canonical transitive frame with an active verb form (A-form), while (58b) is a variant of the dative-subject construction with a non-active verbal counterpart (P-form). Notice that the latter involves an intransitive clausal predication, which can occur as an independent intransitive sentence, as in (58c) (cf. the structure in (54b)).

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4 In Japanese prenominal modification of this type is indistinguishable from relative clause modification. If a true relative clause is involved with relevant arguments, both the ‘subject’ and the ‘object’ readings are possible as in: *Hanako ga kirai na hito* ‘the person who dislikes Hanako/the person whom Hanako dislikes’. Also with an ‘understood’ argument, the following interpretation is also possible: (*natto* *ga*) *kirai na hito* ‘the person who dislikes (*natto*-fermented soy beans).’

- (58) a. *lamAya kooppe binda*  
 child cup break.PST.A  
 'The child (deliberately) broke the cup.'
- b. *lamAya-atin [kooppe biNduna]*  
 child-INST cup break.PST.P  
 'The child (accidentally) broke the cup.'
- c. *Kooppe biNduna*  
 cup break.PST.P  
 'The cup broke.' (Wijayawardhana, Wickramasinghe and Bynon 1995: 113)

In the case of Japanese, the difference in conceptualization reflected in the diagrams in (54) is not as pronounced as in Sinhala and some other languages and, accordingly, the difference between the (a) versions and the (b) versions in (51) through (53) is not as obvious as in the Sinhala data above.<sup>5</sup> However, the difference can be brought into focus by examining their behavior in a control situation. Since verbs such as *nikumu* 'to hate' and *kirau* 'to dislike' are mental activity verbs, they are not readily controllable. Accordingly, it is hard to cast them into positive imperative forms such as *Hito o nikume!* 'Hate people!'.<sup>6</sup> Forming a negative imperative, however, as in (59a) below, is much easier, indicating that a certain degree of controllability can be ascribed to this construction type. This is not so with the corresponding non-canonical construction as shown by the fact that (59b) is not a possible imperative form.

- (59) a. [*Hito o nikumu*] *no wa yamemasyoo* (cf. (54a))  
 people ACC hate PRT TOP let's.stop  
 'Let's stop hating people.'
- b. \**[Hito ga nikui] no wa yamemasyoo* (cf. (54b))  
 people NOM hate PRT TOP let's.stop  
 'Let's stop hating people.'

Thus, the structures shown in (54) correspond to the different conceptualization patterns of similar experiential states.

<sup>5</sup> Indeed, it is unlikely that the relevant verbal predicates in (50) are used as such in a straightforward manner. They are typically used in the stativized form by means of the ending *-te iru* 'to be', minimizing the contrast between the relevant pairs even more; e.g. *Mami wa Ken o nikun-de iru* vs. *Mami wa Ken ga nikui* 'Mami hates Ken.'

<sup>6</sup> If a specific context is provided, an imperative is more readily formed with some of these verbal predicates., e.g. *Boku o nikumitakereba, nikume* 'If you want to hate me, hate (me).'

### 4.3 Japanese NCC as double subject construction

It is generally agreed that the so-called possessor ascension construction involves the following structure, the double subject construction.

- (60) a. *Ken ga asi ga nagai.*  
 Ken NOM leg NOM long  
 ‘Ken has long legs.’
- b. [*Ken ga* [*asi ga nagai*]]  
 Large SUBJ Small SUBJ PRED

Parallel structures are found in a fair number of languages world-wide. We use the terms ‘large subject’ and ‘small subject’ following the practice of Japanese grammatical tradition, although in this tradition the former is often used in reference to the topic construction involving the particle *wa* on the first nominal (large subject).<sup>7</sup> It is uncontroversial that the adjectival predicate *nagai* ‘long’ predicates over the second nominal (small subject) *asi* ‘leg,’ for the sentence is saying that it is the legs that are long, not Ken. The large subject (*Ken ga*) in turn is predicated over by a clausal predicate (*asi ga nagai* ‘legs are long’), which describes a state of affairs whose truth is confined to the domain of the large subject.

As we noted immediately above, an expression like (60a) involving a body part or a kinship term (as in (48)) cannot stand alone without reference to a possessor or, in the latter case, a relative. Thus, the portion *asi ga nagai* ‘legs are long’ in (61a) below is also incomplete or elliptical, and the possessor must be determined either by means of a genitive modifier, as in (61b) below, or by a large subject in the double subject construction (60a). Indeed, the same applies to comparable English expressions as can be seen from the fact that the English translations of (48), (49a), and (61a) below either do not make sense or make a false universal proposition.

- (61) a. ?*Asi ga nagai.*  
 leg NOM long  
 ‘Legs are long.’
- b. *Ken no asi ga nagai*  
 Ken GEN leg NOM long  
 ‘Ken’s legs are long.’

Notice that (61b) stands as a grammatical sentence as opposed to (61a); this difference is crucial in the ensuing discussion of NCCs.

Thus, once again, an expression like (61a) is dependent in the sense that it cannot stand alone. The large subject of the double subject construction (see (60b)) provides a reference point to which the clausal predication is “anchored”. To put it

<sup>7</sup> Other terms used are ‘major subject’ and ‘minor subject’.

differently, the large subject provides a domain or a range in which the truth of the proposition expressed by the clausal predicate is determined. The large subject, in other words, is a variant of a topic about which a clausal predicate describes some crucially relevant state of affairs. In the sense that the large subject determines the domain for the clausal predicate and that the latter's truth is made dependent upon it, we can say that the large subject has dominance over the clausal predicate (and by default over the small subject, as is evident in the case of the possessor-body part relationship). The structure in (60b) represents in structural terms this dependency/dominance relationship.<sup>8</sup>

We now argue that other NCCs examined in this chapter are all variants of the double subject construction. In other words, we are claiming that the so-called dative subject constructions of the (62a)-type and their variants (63a) have the double subject structure shown below – not only in Japanese but also in other languages (see Shibatani and Pardeshi 2001).

- (62) a. *Mami ni eigo ga wakaru.*  
           Mami DAT English NOM understand (verb)  
           'Mami understands English.'
- b. [*Mami ni [eigo ga wakaru]*]  
           Large SUBJ Small SUBJ PRED
- (63) a. *Mami ga/wa Ken ga kirai da.*  
           Mami NOM/TOP Ken NOM dislike COP (adj. nominal)  
           'Mami dislikes Ken.'
- b. [*Mami ga [Ken ga kirai da]*]  
           Large SUBJ Small SUBJ PRED

The double subject analysis in (63b) is not too surprising in view of the fact that there are, after all, two nominative nominals like the double subject construction of the possessor ascension type. What may be unexpected is the positing of a dative-marked large subject for the DAT-NOM construction, as in (62b). We argue here that

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<sup>8</sup> A legitimate question here concerns the difference between the double subject construction and the topic construction involving the particle *wa*; e.g. *Zoo ga hana ga nagai* vs. *Zoo wa hana ga nagai* 'A elephant has a long trunk'. A major difference between them is that in the former, a more stringent 'aboutness' condition applies than in the latter. The clausal predicate in the double nominative construction must express a state of affairs that is construable as a reasonable way of characterizing the large subject. Thus, while *Kyoto wa boku no ani ga sunde iru* 'As for Kyoto, my brother lives (there)' is a possible topic construction, its double subject counterpart *Kyoto ga boku no ani ga sunde iru* is not, since it is decidedly odd to characterize Kyoto in terms of my brother's living there. See Shibatani and Cotton (1977) on this.

there is nothing wrong with having non-nominative case particles in large subject position. Indeed, there are expressions like the following, where postpositions do occur in large subject position:

- (64) a. [*Kono heya kara ga [Huzi-san ga yoku mieru]*  
           this room ABL NOM Fuji-Mt. NOM well visible  
           ‘It is from this room that Mt. Fuji is very visible.’
- b. [*Ken to ga [itiban benkyoo ga sinikui]*  
           Ken COM NOM most study NOM hard.to.do  
           ‘It is with Ken that studying is most difficult.’
- c. [*Tookyoo made ga [kuroo ga ooi]*  
           Tokyo until NOM trouble NOM many  
           ‘It is until Tokyo that there are many troubles.’ (Talking about a journey up to and beyond Tokyo)

The fact that we do not obtain a large subject with a *ni-ga* combination in the dative subject construction is that there is a general prohibition against combining the central case markers *ga*, *o*, *ni*, which express grammatical functions rather than semantic relations like the ablative, the comitative, and other peripheral particles do. For example, the genitive particle *no* can combine with *e* ‘to’, *kara* ‘from’, *to* ‘with’, *made* ‘until’, and *de* ‘in/at’, but it cannot combine with *ga*, *o*, or *ni*. It might be worth noticing that the topic particle *wa* is slightly more tolerant of case particles and allows the dative *ni* to combine with it, but it cannot combine with the accusative *o* or with the nominative *ga*:

- (65) a. [*Mami ni wa [eigo ga wakarui]*] (cf. (62b))  
           Mami DAT TOP English NOM understand  
           ‘Mami understands English.’
- b. [*Kono hon (\*o) wa [Mami ga yonde-iru]*  
           this book (\*ACC) TOP Mami NOM read-be  
           ‘As for this book, Mami is reading it.’
- c. [*Mami (\*ga) wa yoku benkyoo suru]*  
           Mami (\*NOM) TOP hard study do  
           ‘Mami studies hard.’

#### 4.4 The degree of dependency of clausal predicates

Studies of dative subject constructions in general have recognized that their occurrence is centered around the semantic domains of possession/existence, psychological states, physiological states, and a few others, as described in Section 3 (see (25)

above). Without a unifying notion of dependency, it would remain simply a curious fact that possession, psychological states, and physiological states receive similar grammatical treatment. For example, why is it that the following three expressions entail similar grammatical structures?

- (66) a. [Boku ni (wa) [kodomo ga san-nin iru]]  
 I DAT (TOP) children NOM three-person exist  
 'I have three children.'
- b. [Boku ga/wa [Mami ga suki da]]  
 I NOM/TOP Mami NOM like COP  
 'I like Mami.'
- c. [Boku ga/wa [atama ga itai]]  
 I NOM/TOP head NOM hurting  
 'I am hurting in the head.'

Is there anything in common between having children and liking someone? Probably nothing in terms of case relations or semantic roles. To call the possessor nominal in (66a) an experiencer is stretching the case role of experiencer too far (although having children is certainly a worthwhile experience!). What unifies these two expressions is the notion of dependency. First, existence is defined in terms of the location in which it obtains. If a place is involved, we have an existential expression, and if it is a person, we obtain a possessive expression like (66a). Thus, existence and the structure that expresses it are dependent upon a locative expression. Likewise, psychological states and physiological states obtain only in relation to (i.e. are dependent upon) a person who feels and/or recognizes them; they cannot occur apart from a cognizer. Indeed, the following are decidedly odd unless they are understood in relation to the speaker or some other entity (such as a location for (67)) in the context.

- (67) a. Kodomo ga san-nin iru.  
 children NOM three-person exist  
 'Three children exist.'
- b. Mami ga suki da.  
 Mami NOM like COP  
 'Mami is likeable.'
- c. Atama ga itai.  
 head NOM hurting  
 '(lit.) Head is hurting.'

What the above discussion boils down to is this: There are certain states of affairs that cannot happen or obtain independently from some domain in which they occur, while certain other states of affairs can. For the latter, observe the following:

- (68) a. *Ken ga hasit-ta*  
           Ken NOM run-PST  
           ‘Ken ran.’
- b. *Tikyuu wa marui*  
           earth TOP round  
           ‘The earth is round.’
- c. *Mami wa kirei da*  
           Mami TOP pretty COP  
           ‘Mami is pretty.’

What are described here are independently obtaining states of affairs. For example, Ken’s running has taken place regardless of my observing it. Similarly, the property of roundness and that of prettiness obtain with regard to the earth/Mami whether or not they are recognized by a particular person; they are universally-held descriptions of the properties of these entities. Needless to say, some of these descriptions might not be universally agreed upon especially with properties such as prettiness characterizable by relative degrees. Under such circumstances, one may “personalize” the state of affairs and make it dependent upon a specific domain, as in the following expression.

- (69) [*Boku ni wa [Mami ga kirei da]*]  
       I DAT TOP Mami NOM pretty COP  
       ‘To me, Mami is pretty.’

Notice the strangeness of “personalizing” a universal description.

- (70) ???[*Boku ni wa [tikyuu ga marui]*]<sup>9</sup>  
       I DAT TOP earth NOM round  
       ‘To me, the earth is round.’

The above discussion already indicates that there are degrees of independence among the various clauses. (68b), for example, is more independent than (68c), which can be “personalized,” and, this in turn is more independent than those in (67), which cannot stand independently from the domain framing the states of

<sup>9</sup> That this expression sounds all right when uttered by a dissenter of the Flat Earth Society underscores the point being made here.

affairs they describe. We shall now show that this kind of degree of dependency influences whether NCCs exhibit the NOM-NOM pattern or DAT-NOM pattern, and that it has significant syntactic repercussions in the overt expressions of subject properties of the two subjects involved, i.e. large subject and small subject.

One might be surprised at the inclusion of an expression like the following under the heading of possession (see (26)).

- (71) a. [Ken ga [atama ga ookii]]  
 Ken NOM head NOM big  
 'Ken has a big head.'
- b. [Mami ga [yubi ga kirei da]]  
 Mami NOM fingers NOM beautiful COP  
 'Mami has beautiful fingers.'

The reason for describing these expressions in terms of possession is because they fill a gap found in Japanese possessive constructions.<sup>10</sup> Japanese has a possessive expression involving the verb *motu* 'to have/possess', but this can be used only with inalienably possessed objects.

- (72) a. \*Ken ga ookina atama o motte iru.  
 Ken NOM big head ACC have be  
 'Ken has a big head.'
- b. \*Mami ga kireina yubi o motte iru.  
 Mami NOM beautiful fingers ACC have be  
 'Mami has beautiful fingers.'
- c. Ken ga takusan hon o motte iru.  
 Ken NOM a.lot book ACC have be  
 'Ken has a lot of books.'
- d. Mami ga yoi kuruma o motte iru.  
 Mami NOM nice car ACC have be  
 'Mami has a nice car.'

(72a) would only be possible if (carnivorous) Ken had a big detached head. The existential verb *aru*, which calls for the DAT-NOM case frame, cannot be used with body parts, and thus, the first two expressions below are not possible.

<sup>10</sup> The other possibility is using the verbal expression *site iru* '(lit.) doing,' as in *Ken wa ooki na atama o site iru* 'Ken has a large head'.



- (73) a. \**Ken ni (wa) ookina atama ga aru.*  
 Ken DAT (TOP) big head NOM exist  
 ‘Ken has a large head.’
- b. \**Mami ni (wa) kireina yubi ga aru.*  
 Mami DAT (TOP) beautiful fingers NOM exist  
 ‘Mami has beautiful fingers.’
- c. *Ken ni (wa) ookina hokuro ga aru.*  
 Ken DAT (TOP) big mole NOM exist  
 ‘Ken has a big mole.’
- d. *Mami ni (wa) siraga ga aru.*  
 Mami DAT (TOP) grey.hair NOM exist  
 ‘Mami has grey hair.’

While possession of pathological features such as moles and grey hair is expressible in the DAT-NOM case frame, possession of a body part is not. We construe this to mean that the NOM-NOM case frame expresses a higher degree of dependency between the large subject and the predicate clause than the DAT-NOM frame does.<sup>11</sup> Kuno (1973: 90–91) lists predicates taking the DAT-NOM pattern as well as those taking the NOM-NOM pattern. His list is given below, rearranged for expository convenience.

- (74) DAT-NOM predicates:
- |                      |  |
|----------------------|--|
| verbs:               | - <i>reru</i> (potential derivatives), <i>dekiru</i> ‘can do’, <i>wakaru</i> ‘understand’, <i>aru</i> ‘have/exist’, <i>nai</i> ‘do not have/non-existence’, <i>iru</i> ‘exist’, <i>mieru</i> ‘visible’, <i>kikoeru</i> ‘audible’ |
| Adjectives:          | <i>omoshiroi</i> ‘fun/enjoyable’, <i>osorosii</i> ‘fearful’, <i>tanosii</i> ‘enjoyable’, <i>arigatai</i> ‘thankful’  |
| Adjectival nominals: | <i>hituyoo da</i> ‘necessary’, <i>kanoo da</i> ‘possible’, <i>konnai da</i> ‘difficult’, <i>yooi da</i> ‘easy’, <i>nigate da</i> ‘not good at doing something’   |

<sup>11</sup> Notice that the possessor ascension construction in subject position, where the NOM-NOM pattern is observed, typically involves inalienable possession in other languages as well.

## (75) NOM-NOM predicates

verbs: *iru* 'need'

Adjectives: *-tai* (desiderative derivatives), *hosii* 'want', *nikurasii* 'hateful', *itosii* 'dear', *hazukasii* 'ashamed', *kawaii* 'cute', *netamasii* 'jealous', *utiosii* 'mortifying', *umai* 'good at', *urayamasii* 'envious', *mazui* 'bad at', *muzukasii* 'difficult'

Adjectival-nominals: *heta da* 'bad at', *zyoosu da* 'good at', *kirai da* 'hateful', *suki da* 'like', *tokui da* 'good at', *zannen da* 'sorry'

Although it is not quite absolute, there appears to be a general tendency in that the predicates occurring in the DAT-NOM frame are more capable of being used independently, while those belonging to the NOM-NOM class appear to be less so. For example, predicates such as *omosiroi* 'enjoyable' and *osorosii* 'fearful' can be used independently of the cognizer, stating general properties of the subject nominal.<sup>12</sup>

(76) a. *Kono hon wa omosiroi.*  
 this book TOP enjoyable  
 'This book is enjoyable.'

b. *Ano hito wa osorosii.*  
 that person TOP fearful  
 'That person is fearful. / That person is frightening.'

These expressions are used when there is sufficient ground for the speaker to believe that the described properties of the subject nominals are likely to be met with agreement from others, i.e. are construable as universal truths. Or, they may be personalized and delimited to a particular domain (e.g. to a particular cognizer) in which the statement is claimed to hold true, by tacking them onto a dative nominal, as below:

(77) a. *Boku ni (wa) kono hon ga omosiroi.*  
 I DAT (TOP) this book NOM enjoyable  
 'To me, this book is enjoyable.'

b. *Boku ni (wa) ano hito ga osorosii.*  
 I DAT (TOP) that person NOM fearful  
 'To me, that person is fearful.'

<sup>12</sup> See Tokieda (1950) and Kuno (1973) for related discussion.

Other predicates in this group that can be used independently include the following:

- (78) a. *Koko kara yama ga mieru.*  
 here from mountain NOM visible  
 ‘A mountain is visible from here.’  
 b. *Yoi oto ga kikoeru.*  
 good sound NOM audible  
 ‘A good sound is audible/you can hear a good sound.’
- (79) a. *Ken ga kite kureta no wa arigatai.*  
 Ken NOM come gave that TOP grateful  
 ‘It is gratifying that Ken came (for us).’  
 b. *Eiga ni iku koto wa tanosii.*  
 movies to go that TOP fun  
 ‘It is fun to go to movies.’
- (80) *Kono zidoosya o kau koto wa yooi da/kanoo da/konan da.*  
 this car ACC buy that TOP easy/possible/difficult  
 ‘It is easy/possible/difficult to buy this car.’

While it is difficult for predicates like *wakaru* ‘understand’, *nigate da* ‘bad at’, and the existential verbs *aru* ‘exist/have’, *nai* ‘not exist/not have’, and *iru* ‘exist’ to occur independently of a cognizer/possessor/location, others taking the DAT-NOM frame can. Potential derivatives require some historical explanation. First, some of them can occur independently as below:

- (81) a. *Koko de wa Nihongo ga hanas-e-ru.*  
 here at TOP Japanese NOM speak-POTEN-PRS  
 ‘Here, Japanese can be spoken/One can speak Japanese here.’  
 b. *Kono hon wa kantan ni yom-e-ru.*  
 this book TOP easily read-POTEN-PRS  
 ‘This book can be read easily.’  
 c. *Kono mizu wa nom-e-ru.*  
 this water TOP drink-POTEN-PRS  
 ‘This water is potable.’

Potential expressions historically arose from spontaneous/passive constructions. These constructions did not have to overtly express an agent, like the passive of many other languages. The potential developed by using an agentless passive/potential clause as a clausal predicate. Indeed, we can observe the potential/passive

split in terms of how a (potential) agent is expressed; when it is expressed clause internally and as an optional adjunct, we obtain a passive expression. In the potential expression, on the other hand, the potential agent is expressed in sentence initial position. (82a), for example, is ambiguous between the two readings indicated by the translations. By inserting the (potential) agent either as in (82b) or as in (82c), we obtain either a potential or a passive construction.

- (82) a. *Kono kodomo.tati wa osie-rare-ta.*  
           this children TOP teach-PASS/POTEN-PST  
           ‘These children were teachable/These children were taught.’
- b. *Ken ni wa [kono kodomo.tati ga osie-rare-ta]*  
           Ken DAT TOP this children NOM teach-POTEN-PST  
           ‘Ken could teach these children.’
- c. *Kono kodomo.tati wa Ken ni osie-rare-ta.*  
           these children TOP Ken by teach-PASS-PST  
           ‘These children were taught by Ken.’

Thus, although in Modern Japanese the potential ending has diverged from the passive morpheme when the verb root ends in a consonant, changing from *-(r)are* to *-e*, historical evidence suggests that it arose from a passive/potential clause in the manner described above. (When a verb root ends in a vowel, the potential and the passive suffixes are still identical in Modern Japanese, as the examples in (82) show.) In other words, the potential verbals calling for the DAT-NOM case frame arose from an independent clause of the type shown in (82a). Other DAT-NOM verbs such as *dekiru* ‘can do’, *wakaru* ‘understand’, *kikoeru* ‘be audible’, and *mieru* ‘be visible’ also developed from spontaneous middle expressions.

Compared to the above, many of the predicates calling for the NOM-NOM frame are highly dependent in that they cannot occur independently of a cognizer nominal. Again, some predicates belonging to the adjective and the adjectival nominal class, e.g. *kawaii* ‘cute’, *muzukasii* ‘difficult’, *heta da* ‘bad at’, and *zannen da* ‘sorry’ seem to be able to form independent clauses. Others, however, require a cognizer nominal, and cannot stand as independent sentences (i.e. without implicit cognizers). The following are all elliptical sentences:

- (83) a. *Kono hon ga/wa iru.*  
           this book NOM/TOP necessary  
           ‘This book is necessary (for someone).’
- b. *Mizu ga/wa hosii.*  
           water NOM/TOP want  
           ‘(I) want water.’

- c. *Kono hon ga/wa yomi-tai.*  
 this book NOM/TOP read-DESI  
 ‘(I) want to read this book.’
- d. *Mami ga/wa suki da.*  
 Mami NOM/TOP like COP  
 ‘(Someone) likes Mami.’

## 4.5 The syntax of double subject constructions

One of the motivations for analyzing dative subject constructions as transitive has been the fact that the dative nominal possesses certain subject properties (see Y. Kachru, B. Kachru and Bhatia 1976; Shibatani 1977). This fact alone does not really argue for the transitive analysis, however, for we know that the large subject of the double subject construction (or the possessor ascension construction) also shows subject properties. In the Relational Grammar framework, the Relational Succession Law was posited to capture this fact (Perlmutter 1983). If dative subject constructions are analyzed as double subject constructions, then the fact that dative nominals exhibit some subject properties comes as no surprise. What is not made clear in this framework is why the facts behind the Relational Succession Law obtain. Certainly, the structural relationship between the large subject and the small subject indicates that the former dominates the latter. But clearly this dominance relationship is a reflection of a semantic dominance or dependency that obtains between the large subject and the clausal predicate in the relevant constructions. In what follows, we examine how this notion of dependency interacts with syntax; i.e. how the distribution of subject properties over the large subject and the small subject correlates with the notion of dependency discussed earlier.

First, let us examine the straightforward case of double subject constructions involving body parts, where there are two nominative-marked contenders for subject properties:

- (84) a. [*Hata-sensei ga/wa [se ga takai]*]  
 Hata-prof. NOM/TOP height NOM high  
 ‘(lit) Prof. Hata’s height is high/Prof. Hata is tall.’
- b. [*Hata-sensei ga/wa [atama ga ookii]*]  
 Hata-prof. NOM/TOP head NOM big  
 ‘Prof. Hata has a big head.’
- c. [*Hata-sensei ga/wa [ha ga itai]*] *yooda*  
 Hata-prof. NOM/TOP tooth NOM hurting seem  
 ‘Prof. Hata seems to have a toothache.’

That the large subject in these constructions has the properties of reflexive binding, subject honorification, and control of the gap in a clausal conjunct is clear from the following:

- (85) [*Hata-sensei ga/wa* [*se ga go-zibun no*  
Hata-prof NOM/TOP height NOM HON-self GEN  
*musuko-san yori o-takai*]]  
son than HON-high  
'Prof Hata is taller than his own son.'

- (86) [*Hata-sensei<sub>i</sub> ga* [*ha ga itaku*]]-*te* [ $\emptyset_i$  *okomari da*]  
Hata-prof NOM tooth NOM hurting-and troubled COP  
'Prof. Hata has a toothache and is troubled.'

In (85) the adjectival predicate *takai* 'tall/high' has an honorific prefix, which is triggered by the subject as in a simple adjectival predicate sentence. In this example, it is triggered by the large subject nominal *Hata-sensei ga*. Indeed, the small subject *se* 'height', which is directly predicated by the adjectival predicate *takai*, does not trigger the subject honorific prefix, as shown in (87a) below; it is only when there is a large subject that the honorific prefix occurs.

- (87) a. \**Hata-sensei no se ga o-takai.*  
Hata-prof GEN height NOM HON-high  
'(lit.) Prof. Hata's height is tall.'
- b. [*Hata-sensei ga* [*se ga o-takai*]].  
Hata-prof NOM height NOM HON-high  
'(lit.) Prof. Hata has a tall height.'

In (85) the large subject also binds the reflexive form *go-zibun* 'HON-self', a property also shared by the prototypical subject in Japanese.<sup>13</sup>

(86) shows that the large subject can control a gap in a clausal conjunct. On the other hand, it is not easy to show that a large subject can be the target of coordinate reduction. (88a) may appear to indicate that this is indeed possible. However, it is not entirely clear whether (88a) has the coordinate structure indicated. It seems more likely that the coordination takes place at the level of a clausal predicate, as shown in (88b). The situation, thus, remains unclear with regard to this property.

<sup>13</sup> See Tsunoda (1995) for a relevant discussion on the honorification of possessed entities.

- (88) a. [*Hata-sensei<sub>i</sub> ga [ke ga usuku]-te [Ø<sub>i</sub> [atama ga*  
 Hata-prof NOM hair NOM thin-and head NOM  
*hagete.iru]*  
 balding  
 ‘Prof Hata has thin hair and (his) head is balding.’
- b. [*Hata-sensei ga [[ke ga usuku-te atama ga hagete.iru]*  
 Hata-prof NOM hair NOM thin-and head NOM balding  
 ‘Prof. Hata is thin-haired and bald-headed.’

The problem with the phenomena of reflexive binding and honorification is that they call for a human referent, and when there is only one nominal with a human referent as in the examples involving body parts, it is not entirely clear whether the distribution of these subject properties is due to the lop-sided distribution of this humanness property. It is therefore imperative for us to examine a phenomenon in which both a human nominal and a body part nominal could conceivably be the controller of the relevant process. The control of a gap in a coordinated structure appears to provide the appropriate context. In (89a) below, there is only one subject *Ken no asi* ‘Ken’s legs,’ and indeed it controls the gap in the clausal conjunct. However, when the expression is cast in the double subject construction with both a large and a small subject, the latter cannot control the gap (89b), while the former can, as seen above (86) and in (89c) below:

- (89) a. [*Ken no asi<sub>i</sub> ga nagaku]-te [itumo Ø<sub>i</sub> beddo kara*  
 Ken GEN leg NOM long-and always bed from  
*tukideteiru]*  
 stick.out  
 ‘Ken’s legs are long and always stick out from the bed.’
- b. \*[*Ken ga [asi<sub>i</sub> ga nagaku]-te [itumo Ø<sub>i</sub> beddo kara*  
 Ken NOM leg NOM long-and always bed from  
*tukideteiru]*  
 stick.out  
 ‘Ken’s legs are long and always stick out from the bed.’
- c. [*Ken<sub>i</sub> ga [asi ga nagaku]-te [itumo Ø<sub>i</sub> komatteiru]*  
 Ken NOM leg NOM long-and always troubled  
 ‘Ken’s legs are long and always stick out from the bed, and (he) is troubled.’

In double subject constructions involving body parts, it appears to be the case that the large subject usurps the subject properties of the small subject, which the

predicate actually predicates over. Our claim is that this is due to the high degree of dominance that the large subject has over the clausal predicate, whose subject is a body part inalienably possessed by the large subject. From this hypothesis, we would expect that if the clausal predicate contains a small subject with an alienable referent, it may assert its subject status more strongly than in a case involving an inalienably possessed body part. This predication is borne out. In (90) below, it is the small subject that triggers subject honorification, binds the reflexive form, and controls the gap in the second conjunct clause.

- (90) a. [Zyun-kun      ga      [ryoosin   ga      go-kenzai   da]]  
 Jun-FAMILIAR   NOM   parents   NOM   HON-alive   COP  
 'It is Jun whose parents are alive.'
- b. [Hata-san   ga      [okusan   ga      zibun   no      kaisya      o  
 Hata-Mr      NOM   wife      NOM   self      GEN   company   ACC  
 keiei-site      iru]]  
 manage-do   be  
 'It is Mr. Hata whose wife runs (her) own company.'
- c. [Hata-san   ga      [musukosan<sub>i</sub>   ga      kasikoku]]-te   [itumo   Ø<sub>i</sub>  
 Hata-Mr      NOM   son      NOM   smart-and      always  
 yoku   hataraku]  
 hard   work  
 'It is Mr. Hata whose son is smart and works hard.'
- d. [Hata-san<sub>i</sub>   ga      [musukosan   ga      kasikoku]]-te   [itumo   Ø<sub>i</sub>  
 Hata-Mr      NOM   son      NOM   smart -and      always  
 ziman-site   iru]  
 boast-do   be  
 'It is Mr. Hata whose son is smart and who is always boasting.'

All the large subjects in the above examples can be converted to the genitive form showing the parallelism with the possessor ascension constructions involving body parts. These constructions, however, differ markedly from the earlier double subject constructions in that it is the small subject that asserts its subject status with respect to the relevant phenomena. In (90a), the large subject has the familiar title *-kun*, whose presence prevents the honorification of its referent. Hence, it is the small subject *ryoosin* 'parents' that triggers subject prefixation on the predicate. Needless to say, this causes difficulty for the Relational Succession Law postulated in conjunction with the possessor ascension analysis proposed in Relational Grammar (Perlmutter 1983). In (90b), though there are two nominal binding candidates for the reflexive form, only the small subject can in fact bind the reflexive in this construction (Japanese reflexive binding crosses clausal boundaries). (90c) and (90d)



show that a gap in the second conjunct clause can be controlled either by the small subject or by the large subject. However, a large subject appears to be a stronger contender to this kind of interclausal syntax; hence, of (90c) and (90d), the latter seems easier to accept than the former.

Among the predicates that call for the DAT-NOM case frame, the verbs *iru* 'exist/have' and *aru* 'exist/have' show a somewhat subtle but interesting contrast. With a locative nominal, these verbs express the existence of an entity and are sensitive to its animacy.

- (91) a. *Asoko ni kodomo ga iru/\*aru.*  
           there LOC child NOM exist/exist  
           'There is a child over there.'
- b. *Asoko ni takai ki ga \*iru/aru.*  
           there LOC tall tree NOM exist/exist  
           'There is a tall tree over there.'

When a human possessor occurs instead of a location, certain animate entities may co-occur with the verb *aru*, as in (92b) below.

- (92) a. *Hata-sensei ni (wa) kireina okusan ga iru.*  
           Hata-prof DAT (TOP) beautiful wife NOM exist  
           'Prof. Hata has a beautiful wife.'
- b. *Hata-sensei ni (wa) kireina okusan ga aru.*  
           Hata-prof DAT (TOP) beautiful wife NOM exist  
           'Prof. Hata has a beautiful wife.'

Despite the superficial similarity between the *iru* and the *aru* possessive constructions, they exhibit contrastive behavior with regard to some syntactic phenomena. First, observe the honorification pattern;

- (93) a. *Hata-sensei ni (wa) kireina okusan ga iru/oideni naru.*  
           Hata-prof DAT (TOP) beautiful wife NOM exist/exist.HON  
           'Prof. Hata has a beautiful wife.'
- b. *Hata-sensei ni (wa) sirami ga iru/#oideni naru.*  
           Hata-prof DAT (TOP) lice NOM exist/exist.HON  
           'Prof. Hata has lice/Prof. Hata is lice-infested.'
- (94) a. *Hata-sensei ni (wa) kireina okusan ga aru/oarini naru.*  
           Hata-prof DAT (TOP) beautiful wife NOM exist/exist.HON  
           'Prof. Hata has a beautiful wife.'

- b. *Hata-sensei ni (wa) bakudaina syakkin ga aru/oarini naru.*  
 Hata-prof DAT (TOP) large debt NOM exist/exist.HON  
 ‘Prof. Hata has a large debt.’

In the *iru* possessive construction, it is the small subject that triggers honorification, as indicated by the inappropriateness of the honorific version of (93b), which honorifies the lice. If the dative nominal *Hata-sensei* ‘Prof. Hata’ were a controlling subject, then we would expect (93b) to be appropriate with an honorific form. In contradistinction to this, it is the large subject that triggers honorification in the *aru* possessive construction. Thus, unlike (93b), (94a) is quite appropriate with the honorific verbal form. This contrast between the *iru* and the *aru* constructions can be further confirmed by the following examples. In (95a), a nominative nominal triggers honorification and an appropriate honorific expression obtains. In (95b), on the other hand, a dative subject triggers honorification, rendering the honorific version inappropriate; one does not show deference to a familiar person with the second person form *kimi* ‘you’. The sentence would be perfectly natural, however, if the dative nominal in (95b) contained a deferential second person form such as *anata-sama*.

- (95) a. *Kimi ni (wa) rippana ryoosin ga iru/oideni naru.*  
 you.FAM DAT (TOP) great parents NOM exist/exist.HON  
 ‘You have great parents.’  
 b. *Kimi ni (wa) rippana ryoosin ga aru/#oarini naru.*  
 you.FAM DAT (TOP) great parents NOM exist/exist.HON  
 ‘You have great parents.’

Another phenomenon showing a parallel contrast between these two possessive constructions is quite subtle; observe the following.

- (96) a. [*Hata-sensei ni (wa) utukusii okusan<sub>i</sub> ga*  
 Hata-prof DAT (TOP) beautiful wife NOM  
*i]-te [itumo Ø<sub>i</sub> tanosi sooni siteirassyarū].*  
 exist-and always happy look doing.HON  
 ‘Prof. Hata has a beautiful wife and (she) is always looking happy.’  
 b. [*Hata-sensei<sub>i</sub> ni (wa) utukusii okusan ga*  
 Hata-prof DAT (TOP) beautiful wife NOM  
*at]-te [itumo Ø<sub>i</sub> tanosi sooni siteirassyarū].*  
 exist-and always happy look doing.HON  
 ‘Prof. Hata has a beautiful wife and (he) is always looking happy.’

Here the contrast is admittedly subtle, but the above interpretation appears highly plausible, indicating that in the *iru* possessive construction the small subject controls the gap in the second conjunct clause, while in the *aru* counterpart the large subject has the control property. This pattern is consistent with the honorification pattern seen above.

The phenomenon of reflexive binding is too subtle to be able to distinguish between the two constructions. Still, the honorification pattern examined in (93) through (95) is robust enough to warrant separate treatment of the distribution of subject properties over the large and small subjects. We would like to claim that the fact that the large subject asserts its subject status more strongly than the small subject in the *aru* possessive construction is due to the greater dependency that the clausal predicate has on the large subject in this construction. Compared to this, the *iru* possessive construction involves a more independent clausal predicate. This contrast can be observed by examining the nature of possessed entities allowed in the *aru* possessive construction.

What can be possessed in the *aru* possessive construction is rather limited. The best candidates are: 1) (mostly acquired) bodily features such as *siraga* ‘grey hair’, *nikibi* ‘pimples’, *siwa* ‘wrinkles’; 2) personal traits and possessions such as *warui kuse* ‘bad habit’, *sainoo* ‘ability’, *tie* ‘wisdom’, *kangae* ‘idea’, *zoosyo* ‘personal book collection’, *tyosyo* ‘authored work’ (for some reason *syakkin* ‘debt’ also belongs here); and 3) close kin and associates such as *okusan* ‘wife’, *musuko* ‘son’, *tomodati* ‘friends’, and *desi* ‘disciples’. We noted earlier that inalienable possession of body parts cannot be expressed by the possessive construction; they need to be couched in a possessor ascension-type double subject construction. Thus, while *aru* possessive constructions require entities closely related to the possessor, they cannot contain ones that are very closely connected like body parts.<sup>14</sup>

The *iru* possessive construction, on the other hand, allows a larger class of entities, though these are limited to animates and typically humans. Observe the following, which illustrate the difference in the range of possessed entities permitted between the two constructions.

- (97) a. *Ken ni (wa) yoi tomodati ga takusan iru/aru.*  
       Ken DAT (TOP) good friends NOM many exist/exist  
       ‘Ken has many good friends.’
- b. *Ken ni (wa) yoi siensya ga takusan iru/??aru.*  
       Ken DAT (TOP) good sponsor NOM many exist/exist  
       ‘Ken has many sponsors/supporters.’

<sup>14</sup> See Tsunoda (1995) for a relevant discussion on different types of possessive expressions in Japanese.

- c. *Ken ni (wa) inu ga sanbiki iru/??aru.*  
 Ken DAT (TOP) dog NOM three exist/exist  
 ‘Ken has three dogs.’
- d. *Ken ni (wa) siraga ga iru/\*aru.*  
 Ken DAT (TOP) lice NOM exist/exist  
 ‘Ken has lice.’
- e. *Ken ni (wa) takusan fuan ga iru/\*aru.*  
 Ken DAT (TOP) many fan NOM exist/exist  
 ‘Ken has a lot of fans (followers).’
- f. *Ken ni (wa) teki ga iru/\*aru.*  
 Ken DAT (TOP) enemy NOM exist/exist  
 ‘Ken has an enemy.’

An interesting reflection of Japanese culture in this regard is that, while a husband can possess his wife, a wife cannot possess her husband in the *aru* construction:

- (98) a. *Hata-san ni (wa) yoi okusan ga iru/aru*  
 Hata-Mr DAT (TOP) good wife NOM exist/exist  
 ‘Mr. Hata has a good wife.’
- b. *Mami-san ni (wa) yoi gosyuzin ga iru/???aru*  
 Mami-Ms DAT (TOP) good husband NOM exist/exist  
 ‘Mami has a good husband.’

These observations show that the large subject has a greater dominance over the small subject (and hence the clausal predicate as a whole) in the *aru* possessive construction than in the *iru* construction, which permits a wider range of possessed entities. The difference in the syntax of honorification between the two constructions is a reflection of this difference in the dominance relationship.

Finally, NOM-NOM predicates such as *suki da* ‘like’ and *kirai da* ‘dislike’ are highly consistent in the syntax of honorification, showing a high degree of clausal predicate dependency on the large subject. Thus, the large subject consistently triggers honorification, and the small subject never does.

- (99) a. *Hata-sensei ga Mami ga o-suki da.*  
 Hata-prof NOM Mami NOM HON-like COP  
 ‘Prof. Hata likes Mami.’
- b. *Hata-sensei ga Mami ga o-kirai da.*  
 Hata-prof NOM Mami NOM HON-dislike COP  
 ‘Prof. Hata dislikes Mami.’

- (100) a. #*Mami ga Hata-sensei ga o-suki da.*  
           *Mami NOM Hata-prof NOM HON-like COP*  
           ‘Mami likes Prof. Hata.’
- b. #*Mami ga Hata-sensei ga o-kirai da.*  
           *Mami NOM Hata-prof NOM HON-dislike COP*  
           ‘Mami dislikes Prof. Hata.’

In (100) honorification is triggered by the large subject *Mami*, not by the small subject *Hata-sensei*, hence the inappropriateness of the forms. Most predicates calling for a NOM-NOM case frame show the above honorification pattern, reflecting the high degree of dependency of the clausal predicate on the large subject.

In sum, NCCs reflect a particular pattern of conceptualizing states of affairs distinct from the conceptualization pattern underlying transitive constructions. Many languages show relevant meaning contrasts between canonical and NCCs along the line of the presence vs. absence of volition/control, reflecting the differences between these two patterns of conceptualization. Japanese too shows a subtle meaning contrast. Thus, it would be totally incorrect to consider NCCs as transitive.

#### 4.6 NCC as transitive construction: Kishimoto (2004)

To the best of our knowledge, there has been no serious challenge to the analysis of NCCs as variants of the double subject construction summarized above, except for Kishimoto (2004). We could continue to ignore this easily dismissible paper, but realizing that he repeats the same faulty arguments in Kishimoto (2016) (and perhaps elsewhere), we are obliged to spend a few paragraphs below to point out some fundamental problems in his thinking and the weakness of the paper.

Kishimoto makes a gratuitous assumption that members of a category must be uniform (see Croft (2001) for rigorous arguments against such a view). At the level of constructions, he tries to argue that NCCs are not double subject constructions of the possessor-ascension type (see Section 4.3 above) because the way the large subject is licensed is different between the two. But no one has claimed that the two types of constructions are “the same construction”, as Kishimoto wrongly charges. Kishimoto seems to miss the whole point of the works dealing with NCCs that they are lexically governed constructions. The possessor-ascension type double subject constructions are not, and no one should be confused about the distinction between the two variant types of double subject constructions. The decision we made to group NCCs with the possessor-ascension type under the rubric of double-subject constructions is based on several overarching properties shared to a larger or lesser extent by the variants/species of double subject constructions in Japanese and other languages, including the functional relationship between the large subject and

the clausal predicate, the morphological transitive-intransitive alternating patterns, the case-marking patterns, as well as a number of syntactic properties.

At the level of grammatical relations, we distinguish at least three kinds of subject, the subject of ordinary intransitive and transitive clauses, the large subject, which is predicated by a clausal structure, and the small subject, which is the subject of the clause that predicates over a large subject. Again, they are considered subjects for the reasons discussed above, but as clear from the discussions in our earlier papers and above (see Sections 4.4 and 4.5), we do not expect these different kinds of subject to behave exactly alike, while Kishimoto obviously does. For example, by looking at the distribution of the so-called arbitrary PRO below, he concludes that what we identify as a small subject position in (101c, K's (7)) is not a subject position because it does not permit an arbitrary PRO like an ordinary subject, as in (101a, K's (3)) and a large subject, as in (101b, K's (11)).

- (101) a. [PRO *kodomo o homeru*] *koto wa ii koto da.*  
           children ACC praise that TOP good thing COP  
           ‘Praising children is a good thing.’
- b. [PRO *kodomo ga suki na*] *koto wa ii koto da.*  
           children NOM like COP that TOP good thing COP  
           ‘Liking children is a good thing.’
- c. \*[*John ga PRO homeru*] *koto wa ii koto da.*  
       John NOM praise that TOP good thing COP  
       Lit. ‘John praising is a good thing.’
- d. \*[*John ga PRO suki na*] *koto wa ii koto da.*  
       John NOM like COP that TOP good thing COP  
       Lit. ‘John liking is a good thing.’

Comparing (101c, K's (7)) and (101d, K's (15)), Kishimoto goes on to conclude that what we identify as a small subject is in fact a direct object.

But consider the following, where the small subject position of the possessor-ascension type does not permit an arbitrary PRO.

- (102) a. [PRO *ookii*] *koto wa ii koto da.*  
           big that TOP good thing COP  
           ‘Being big is a good thing.’
- b. [*Taroo ga atama ga ookii*] *koto wa ii koto da.*  
       Taro NOM head NOM big that TOP good thing COP  
       ‘That Taro has a big head is a good thing.’

- c. [PRO *atama ga ookii*] *koto wa ii koto da.*  
       head   NOM big   that TOP good thing COP  
       ‘Having a big head is a good thing.’
- d. \*[*Taroo ga PRO ookii*] *koto wa ii koto da.*  
       Taro   NOM       big   thing TOP good thing COP  
       Lit. ‘Taro having big is a good thing.’

Even if we imagine that everything that Taro has, including his body parts, is big, (102d) is not possible; it is just as bad as (101c) and (101d). Now, Kishimoto’s argument about the distribution of PRO would identify the small subject of the possessor-ascension type to be an object, which goes against his assumption that this construction type has double/multiple subjects. The conclusion he should be drawing is that the small subjects of both NCCs and the possessor-ascension type of double subject constructions are both subjects, but of a different type from both the ordinary subject and the large subject. The likely reason why PRO cannot occur in the small subject position is that, while clauses with a PRO subject underlie generic or universal statements that apply to any arbitrary thing or individual, the predication of clauses with a small subject is confined to the specific domain of the major subject. The distribution of arbitrary PRO thus supports our analysis of treating NCCs and the possessor-ascension type as variants of double subject constructions.

Kishimoto tries to offer a couple of “object” tests that he claims identifies objects correctly. He believes that the small subjects in question pass these tests, suggesting that they are objects. One of them is concerned with the distribution of a special type of *NP no koto* expression, which occurs only in object position, according to Kishimoto. Observe (103) below [(103a) = K’s (18), (103b) = K’s (21), (103b) = K’s (22)].

- (103) a. *John (\*no koto) ga Mary (no koto) o sikatta.*  
       John (GEN THING) NOM Mary (GEN THING) ACC solded  
       ‘John scolded Mary.’
- b. *John (\*no koto) ni Mary (no koto) ga wakaru.*  
       John (GEN THING) DAT Mary (GEN THING) NOM understand  
       ‘John understands Mary.’
- c. *John (\*no koto) ga Mary (no koto) ga suki da.*  
       John (GEN THING) NOM Mary (GEN THING) NOM like COP  
       ‘John likes Mary.’

Since the relevant *NP no koto* does not occur in an ordinary subject position (103a) or in a large subject position (103b)–(103c), and since it occurs in an object position (103a), Kishimoto thinks that it identifies an object correctly. Because the dative-subject construction (103b) and the double nominative construction (103c) allow *NP*

*no koto* in what we claim to be a small subject position, he concludes that that position is actually an object position like the object position in an ordinary transitive sentence such as (103a). There are several problems with Kishimoto's arguments. First of all, *NP no koto* actually does not occur in the object position of prototypical transitive verbs such as *korosu* 'kill' and *naguru* 'hit', and thus the test itself is dubious as an "object test". Indeed, *NP no koto* objects do not passivize, as Kishimoto shows.

- (104) *Mary (\*no koto) ga John ni.yotte sikar-are-ta.*  
 Mary (GEN THING) NOM John by scold-PASS-PST  
 'Mary was scolded by John.'

A more substantial problem with Kishimoto's argument is revealed when we compare the above with the distribution of resultative adverbs, which characterize the resultant state of the object referent but not the subject referent of a transitive change-of-state predication. For example, (105a) below cannot mean that Hanako became big as a result of her raising the child.

- (105) a. *Hanako wa kodomo o ookiku sodateta.*  
 Hanako TOP child ACC big raised  
 'Hanako raised the child big.'  
 b. *Kodomo ga ookiku sodatta.*  
 child NOM big grew  
 'The child grew up big.'

Such adverbs characterize the subject referent of the corresponding intransitive predication, as in (105b) above. Kishimoto's identifying *Mary (no koto)* in (103b) and (103c) above as object is like identifying the subject of (105b) as object. As a matter of fact, there is a general correspondence such that when there is a transitive-intransitive change-of-state predicate pair, a resultative adverb characterizes the transitive object referent and the corresponding intransitive subject referent, showing the "ergative" pattern, in which O and S pattern alike to the exclusion of A (the transitive subject). Below are some additional verb pairs of exhibiting the pattern shown in (105).

- (106) 

<u>Transitive</u>	<u>Intransitive</u>	
<i>niru</i>	<i>nieru</i>	'cook'
<i>yaku</i>	<i>yakeru</i>	'grill'
<i>wakasu</i>	<i>waku</i>	'boil'
<i>kawakasu</i>	<i>kawaku</i>	'dry'
<i>waru</i>	<i>wareru</i>	'cut/break in half'
<i>kowasu</i>	<i>kowareru</i>	'break'
<i>akeru</i>	<i>aku</i>	'open'



There are also some transitive change-of-state verbs that do not have intransitive counterparts, and with which we only see a resultative adverb co-occurring with a direct object.

The distribution of the relevant *NP no koto* that Kishimoto discusses is exactly like that of resultative adverbs. Just as resultative adverbs are permitted only with change-of-state predicates, the *NP no koto* expression in question typically occurs with verbs of cognition and mental states, around which NCCs revolve. Recall from the earlier discussion that a fair number of predicates entering double subject constructions come in pairs like those listed in (25) above. A few are reproduced below, which permit *NP no koto* in exactly the same manner as (105) – cf. (108) below.

- (107) 

<u>Transitive</u>	<u>Intransitive</u>	
<i>nikumu</i>	<i>nikui</i>	‘hate’
<i>natukasimu</i>	<i>natukasii</i>	‘long for’
<i>kanasimu</i>	<i>kanasii</i>	‘sad’
<i>ayasimu</i>	<i>ayasii</i>	‘suspect/suspicious’
<i>netamu</i>	<i>netamasii</i>	‘to be jealous’
<i>kirau</i>	<i>kirai da</i>	‘dislike’
<i>suku</i>	<i>suki da</i>	‘like’
- (108) a. *Hanako wa Taroo (no koto) o nikunde iru.*  
 Hanako TOP Taro (GEN THING) ACC hate.GER be  
 ‘Hanako hates Taro.’
- b. *(Hanako ga/wa) Taroo (no koto) ga nikui (rasii).*  
 Hanako NOM/TOP Taro (GEN THING) NOM hateful (seem)  
 ‘As for Hanako, (it seems) Taro is hateful’.

The transitive-intransitive pattern even extends to some idiomatic expressions of the following type.

- (109) a. *Boku wa kanozyo (no koto) o ki ni siteiru/kaketeiru.*  
 I TOP she (GEN THING) ACC mind to DO/HANG (tr)  
 ‘I have her on my mind/I am worried about her.’
- b. *Kanozyo (no koto) ga ki ni naru/kakaru.*  
 she GEN THING NOM mind to BECOME/HANG (intr)  
 ‘She is on my mind/She worries me.’

The *X o ki ni suru/X ga kini naru* pair is like the literal pair *X o isya ni suru/X ga isya ni naru* ‘make X a doctor/X becomes a doctor’, and the *X o ki ni kakeru/X ga ki ni kakaru* pair is like the pair *kagi o kakeru/kagi ga kakaru* ‘lock the lock/the lock locks’.

Just as one would not want to identify the intransitive subject of (105b) as object, one would not want to identify the intransitive subject of (108b) as object. Both patterns should be described as exhibiting an ergative O=S phenomenon, though the ranges of both O and S involved in it are limited as in the case of the resultative adverb. Thus, contrary to Kishimoto's intention, the distribution of the *NP no koto* phrase actually supports our double subject analysis, which treats the second nominative NP (the small subject) found in (108b) like the intransitive subject (S).

Kishimoto attempts another "object" test, but a slight expansion of the data easily proves the inadequacy of his observation and the falsity of his argument and so it is not worth taking it up here.

## 5 The small subject NP as a grammatical subject in other languages

One of the most exciting things about crosslinguistic studies is that we can garner evidence for a particular analysis that is not obvious when dealing with single languages, like Kishimoto's work reviewed above. Below, we summarize our findings from other languages that support our analysis of NCCs as double subject constructions, in particular the claim that what we have identified as small subjects are indeed syntactic subjects. This demonstration is important compared to showing that the large subject of NCCs is subject because the most works dealing with this topic have largely concentrated on the status of large subjects rather than on the nature of the small subject, as suggested by the title of "Non-nominative subjects" of Bhaskararao and Subbarao's (2004) volumes.

In many European and other languages, case marking and agreement provide a clear means for the identification of grammatical relations. Our analysis, which considers the nominative NP of the dative construction to be (small) subject, is consistent with both case marking and agreement patterns in agreement languages, as clearly shown in the following examples from German, Russian, and Modern Hebrew.<sup>15</sup>

- (110) a. *Mir gefällt dieses Buch.* (German)  
           I.DAT like.SG this book.SG.NOM  
           'I like this book.'

<sup>15</sup> Georgian is interesting in that it makes the large (dative) subject agree with the verb; *Gela-s u-q'var-s bavšv-eb-i* [Gela.DAT love-3SG child-PL-NOM] 'Gela loves children': *bavšv-eb-i k'ocn-i-an nino-s* [child-PL-NOM kiss-3PL Nino-DAT] 'Children kiss Nino'. We thank Marine Ivanishvili of Tbilisi for this information.

- b. *Mir gefallen diese Bücher.*  
 I.DAT like.PL these books.PL.NOM  
 'I like these books.'
- (111) a. *Mne nnavitsja kinga.* (Russian)  
 I.DAT like.3SG.REFL book.SG.NOM  
 'I like the book.'
- b. *Mne nnavjatsja knigi.*  
 I.DAT like.PRES.3PL.REFL book.PL.NOM  
 'I like books.'
- (112) a. *Le Moshe haya sefer.* (Modern Hebrew; AnneHartenstein, p.c.)  
 DAT be.3SG.M.PAST book.M.SG  
 'Moshe has a book.'
- b. *Le Moshe hayu shloscha sfarim.*  
 DAT be.3PL.M/F.PST three book.M.PL  
 'Moshe has three books.'

The grammatical status of the nominative NP has not been debated a great deal in the context of South Asian languages. Once the dative nominal is taken as the subject of the transitive structure, the nominative NP is automatically assumed to be object. The fact that this object occurs in an unmarked (i.e. nominative) form and that it triggers verb agreement has not been of much concern. In the ergative construction, which occurs in many Indic languages in the so-called perfective tense, the object assumes the nominative form and controls verb agreement. Since verb agreement appears to be generally triggered by an unmarked (i.e. nominative) NP irrespective of its grammatical status, agreement does not seem to provide conclusive evidence for the identification of the grammatical relation of either the dative or the nominative NP. Despite this general situation, there still seem to be some agreement facts that point to the subject status of the nominative NP in the South Asian dative construction.

Nepali is interesting in that the ergative NP of a transitive clause agrees with the verb, indicating that agreement in this language operates in an accusative fashion regardless of the morphological ergativity found in the perfective tense.

- (113) *Haamro choraa aaja aa-yo.*  
 Our son today come-3SG.M.PERF  
 'Our son came today.' (Nepali; Clark 1963: 17)

- (114) *Tyo paanii lyaauna Dhaaraa-maa ga-ii.*  
 3SG water fetch Dhaaraa-at go-3SG.F.PERF  
 'She went to Dhaaraa to fetch water.' (Clark 1963: 59)
- (115) *Raam-le nayōō lugaa laa-yo?*  
 Ram-ERG new clothes wear-3SG.M.PERF  
 'Has Ram put on the new clothes?' (Clark 1963: 20)

The above situation – especially the agreement pattern in (114) – contrasts with a number of other major Indic languages whose agreement systems are sensitive to case marking in that a case-marked NP, i.e., a non-nominative NP does not trigger agreement. As can be seen in (115), a case-marked nominal does not block agreement; agreement is triggered by a subject whether it is unmarked or case-marked. From this it is expected that the dative NP of the dative construction in Nepali would trigger agreement if it were the subject of the clause. This is not the case, however; as agreement takes place between the nominative (unmarked) NP and the predicate, indicating that the nominative NP is a (small) subject in the dative construction. The nominative of the NCC in Nepali cannot be a direct object, which in this language does not trigger agreement (see (115)).

- (116) *keTaa-laaii keT-i raamr-i laag-ii.*  
 boy-DAT girl-F beautiful-F feel-F  
 'The boy likes the girl.' (Madhav Pokharel, p.c.)
- (117) *keTi-laaii keT-o raamr-o laag-yo.*  
 girl-DAT boy-M beautiful-M feel-M  
 'The girl likes the boy.' (Madhav Pokharel, p.c.)

In a similar vein, Bengali honorific marking points out the subject status of the nominative NP in a NCC, which involves genitive marking. Both nominative intransitive and transitive subjects in canonical constructions trigger honorific marking on the verb.

- (118) a. *tini hās-ch-en.* (Onishi 2001)  
 3HON.SG.NOM laugh-IMPERF-PRES.2/3HON  
 '(S)he (HON) is laughing (HON).'
- b. *tini ciTHi-Ta poR-ben.*  
 3HON.SG.NOM letter-DEF read-FUT.2/3HON  
 '(S)he (HON) will read (HON) the letter.'

Bengali marks subjects with locative case if they have indefinite or generic reference. Subjects so marked behave almost identically to nominative subjects; in the following example, the locative-marked subject thus triggers honorific marking on the verb, just like regular nominative subjects (Onishi 2001).

- (119) *kalke chilo robibar. Onek-e-i*  
 one.day.removed be.PAST.3ORD Sunday many-LOC-EMPH  
*baRi-te chilen.*  
 house-LOC be+PAST+2/3HON  
 ‘Yesterday was Sunday. (Therefore) many (HON) were (HON) at home.’

A case-marked subject, in other words, triggers honorific marking on the verb. The genitive counterpart of the dative subject, however, does not trigger subject honorific marking; rather, it is the nominative NP that does this, as shown below:

- (120) a. *tini hās-ch-en.*  
 3HON.SG.NOM laugh-IMPERF-PRES.2/3HON  
 ‘S/he (HON) is laughing (HON).’  
 b. *tā-r hāsi pa-cch-e.*  
 3HON.SG-GEN laugh get-IMPERF-PRES.3ORD  
 ‘S/he (HON) feels like laughing (ORD).’
- (121) a. *ama-r baba achen.*  
 1SG-GEN father be/have.PRES.2/3HON  
 ‘I (ORD) have a father.’  
 b. *tā-r du-Ti chele ache.*  
 3HON.SG-GEN two son be/have.PRES.3ORD  
 ‘He (HON) has two sons.’

A similar honorification pattern is seen in Nepali:

- (122) *wahaan-ko batcha cha.* (Sujeet Pradhan, p.c.)  
 he.HON-GEN child be/exist  
 ‘He (HON) has a child.’
- (123) *#wahaan-ko batchaa hunuhuncha.*  
 he.HON-GEN child be/exist.HON  
 ‘He has a child.’
- (124) *wahaan-ko buwaa hunuhuncha*  
 he.HON-GEN father be/exist-HON  
 ‘He (HON) has a father (i.e. his father is still alive).’

Existential predicates in Sinhala – like Japanese – impose an animacy selectional restriction that obtains between the nominative NP and the predicate, not between the dative NP and the predicate, as seen below:

- (125) a. *maTA duwek innAwa.* (Sinhala; Kumara Henadeerage, p.c.)  
 I.DAT daughter.INDEF be-ANIMATE-PRES  
 'I have a daughter.'
- b. \**maTA duwek tiyenAwa.* (Kumara Henadeerage, p.c.)  
 I.DAT daughter.INDEF be-INANIMATE-PRES  
 'I have a daughter.'
- (126) a. *maTA potak tiyenAwa,* (Kumara Henadeerage, p.c.)  
 I.DAT book.INDEF be-INANIMATE-PRES  
 'I have a book.'
- b. \**maTA potak innAwa.* (Kumara Henadeerage, p.c.)  
 I.DAT book.INDEF be-ANIMATE-PRES  
 'I have a book.'

A similar selectional restriction is seen in Gujarati with respect to verbs of pleasing or liking. When the pleasing thing is food, *bhave che* is used, but when it is non-food, *gAm-* is used:

- (127) *Ramesh-ne pen gAm-y-i.* (Mistry 1976: 249)  
 Ramesh.OBJ pen.F like-PAST.F  
 'Ramesh liked the pen.'
- (128) *apne gujAratI khorak bhave che?* (Lambert 1971: 53)  
 you.OBJ Gujarati food be liked be  
 'Do you like Gujarati food?'

Finally, some nominative NP's show the behavioral subject property of reflexive binding in Marathi. Attributing the following sentence to Kashi Wali, Pandharipande (1990: 165) agrees with Wali that the nominative form *to* 'he,' rather than the dative nominal, binds the reflexive.

- (129) *ma-lA to swatahA-cyA gharAt disLA.*  
 I-DAT he.NOM self-of house.in see.PERF.3M  
 'I saw him in his/\*my house.'

All in all, there is a great deal of evidence that many languages in the world treat the nominative NP of NCCs as (small) subject. This comes into direct conflict with the discussion in Section 2, however, where we saw evidence pointing to the subject status of the dative nominal. The dilemma can be easily resolved in a Relational Grammar analysis, in which some subject properties are attributed to the initial subject status of the dative nominal, some to the final subject status of the nominative

NP. However, the distribution of subject properties over these two kinds of nominal is not as uniform and consistent as Relational Grammar would predict. Dative constructions turn out not to be entirely uniform, and a more finely-tuned analysis of them is required, as detailed in Sections 3, 4 and 5, where we proposed to analyze NCCs as variants of the double subject construction, with a large subject and a small subject, over which subject properties are distributed in an intricate manner.

## 6 Conclusion

This chapter has been prepared with two purposes in mind. One is to clarify the nature of NCCs that deviate from both canonical intransitive and transitive sentences.

We have delineated both semantic and syntactic characteristics of Japanese NCCs that motivate a new analysis of them as species of the double (or multiple) subject construction containing as a large subject and a small subject. We have also shown that while the large subject is similar to the ordinary subjects of canonical intransitive and transitive sentences, small subjects vary in the degree to which they behave like ordinary subjects. The dependency relation between the large subject and the predication of the clause functioning as its predicate largely determines the syntactic status of the small subject, whereby the small subject of a clause of greater autonomy tends to behave more like an ordinary subject.

The second purpose is to provide crosslinguistic evidence supporting our double subject analysis of NCCs, in particular the point that the nominative NP in them – what we have labeled as “small subject” – is also a subject. The proposed double subject analysis resolves the dilemma that other researchers have faced dealing with NCCs; namely, while the dative nominal in them displays some syntactic properties of an ordinary subject, the other nominal is marked nominative as if a subject. Indeed, the relevant nominative NP also displays certain syntactic properties of ordinary subjects – a point that has not been very seriously considered in the literature. We have provided ample crosslinguistic evidence, especially from the languages of the Indian subcontinent, for the subjecthood of the nominative nominal in question.

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## 3 Voice extension in passives and causatives

### 1 Introduction

The grammatical notion “voice” came to be known in Japan in the nineteenth century largely through pedagogical grammars of English. As soon as it was applied to Japanese, the Western notion was extended to cover a wider range of phenomena than could possibly have been covered by the original notion. In particular, it was extended to have not only PASSIVES, but also CAUSATIVES, fall under it. This extended notion of voice was entirely foreign to Western pedagogical grammars, but the extension was natural for the Japanese linguist Fumihiko Ōtsuki when he applied the Western notion to Japanese for the first time in an 1889 publication “Gohō-shinan” [Grammar instruction], which constituted the opening part of his four-volume Japanese dictionary called *Genkai* [Ocean of words].

*Genkai* was a monumental achievement, being the first Japanese dictionary in which every entry word was specified for the part of speech it belongs to. To compile a dictionary like this, it is first necessary to determine an appropriate system of parts of speech for Japanese, which practically means to write a grammar for Japanese, and this Ōtsuki did in the “Grammar instruction” part of the dictionary. Many Western grammatical notions were first systematically discussed in Ōtsuki’s grammar, including “voice,” under which he subsumed the following six categories: (i) Active, (ii) Passive, (iii) Potential, (iv) Spontaneous, (v) Causative, and (vi) Honorific.<sup>1</sup> Of these, (ii), (iii) and (iv) are all formed with the same verbal suffix *-(r)are-*, and (v) with *-(s)ase-*. These two suffixes were commonly used in Classical Japanese for the purpose of (vi) as well, deriving honorific forms from the base verbs, but this use has since been restricted to *-(r)are-*; the honorific use of the causative suffix *-(s)ase-* is never heard in the colloquial language now.

The present chapter provides a historiographical and descriptive overview of the analyses of voice-related constructions in Japanese, focusing primarily on the characteristics of Japanese passives and their inherent relatedness to causatives in other languages. The potential, spontaneous, and honorific uses of *-(r)are-* will not be discussed here. For discussion of these uses the reader is referred to such works as Martin (1975), Inoue (1976), Teramura (1982), and Shibatani (1985, 1990), as well as traditional grammars of Japanese such as Matsushita (1930).

In what follows, we first review the types of passives observed in Japanese and then proceed to discuss some of their peculiarities (§2). In particular, the nature

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<sup>1</sup> Ōtsuki’s Japanese terms are given in (i)–(vi) in English translation. Note, though, that many of the grammatical terms Ōtsuki (1889) introduced were themselves Japanese translations of the terms traditionally used in English grammar. See Saiki and Washio (2014: Chapter 4) for some related discussion.

of “Object-retaining” passives is discussed in light of the fact that their semantic equivalents in other languages are often constructed on the basis of CAUSATIVE verbs (Sections 3.1–3.3). This discussion leads us to reconsider the majority view on the origin of the passive construction in Japanese – that it has developed from an INTRANSITIVE construction. We suggest instead that Japanese passives must have developed from a TRANSITIVE construction (Section 3.5). Central to this reasoning is a crosslinguistic generalization here referred to as the “Unidirectionality of Voice Extension” (Section 3.4), which says that, across languages, causative and other transitive constructions easily turn to passive expressions but passive constructions rarely, if ever, turn to causative expressions. Throughout the chapter, we also observe the importance and current relevance of the descriptions made by the grammarians of the late 19th and early 20th centuries, including Fumihiko Ōtsuki (1847–1928), Basil Hall Chamberlain (1850–1935), Yoshio Yamada (1875–1958), and Daizaburo Matsushita (1878–1935), who all made everlasting contributions to Japanese contrastive linguistics, though some of their important observations have attracted surprisingly little attention in the previously written histories of Japanese linguistics. For instance, Chamberlain (1888) characterized Japanese as a language basically lacking PERSONIFICATION, from which he derived the fact that Japanese lacks causatives with an inanimate subject. Although we have no space to discuss this interesting suggestion in any detail, it is touched upon in the final section (Section 4) together with Yamada’s (1908) observation that Japanese passives with an inanimate subject are subject to a particular constraint, from which Western passives are free. For a detailed discussion of these early grammarians and their contemporaries, see Saiki and Washio (2012a), where the history of Japanese linguistics is reexamined with special focus on its relation to Western linguistic thought.

## 2 Some characteristics of Japanese passive voice

### 2.1 A descriptive typology of Japanese passives

Ōtsuki (1889: 35) writes that Japanese has passives of intransitive verbs but European languages seem to lack anything comparable to them. He later published a revised and enlarged version of “Gohō-shinan”, *Kō Nihonbunten* [Comprehensive grammar of Japanese] (with explanatory notes in a separate volume) where he cites examples of the following sort (Ōtsuki 1897, volume II: 84).<sup>2</sup>

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<sup>2</sup> Ōtsuki’s is a grammar of Classical or Literary Japanese, a language based on Early Middle Japanese. I will generally reproduce the Classical examples cited by Ōtsuki and others in Modern Japanese forms. For instance, (1a) is a modified version of Ōtsuki’s original example *Haha ko ni nak-arū*. ‘mother child BY cry-pass’ which is different from (1a) in that there is no Nominative marker on the subject *Haha* and the passive “auxiliary verb” (as Ōtsuki calls it) shows a distinctly Classical “conjugation” *-(r)aru* rather than its Modern equivalent *-(r)areru*. For an analysis of the Classical Japanese conjugations, see Vovin (2003: §5.1), Frellesvig (2010: §3.4) and many other grammar books on Classical Japanese.

- (1) a. *Haha ga ko ni nak-are-ru.*  
 mother NOM child BY cry-PASS-PRS  
 (Lit.) ‘Mother is cried by her child.’
- b. *Otto ni ik-are, ko ni sin-are, ...*  
 husband BY go/pass away-PASS child BY die-PASS  
 (Lit.) ‘Being passed away by my husband and died by my child’

In these examples, observes Ōtsuki (1897, volume II: 84), the subject “does not directly receive action but is only indirectly affected by the action of the original agent, but they are passives all the same”<sup>3</sup> in Japanese, exactly like the following example.

- (2) *Heisi ga teki ni koros-are-ta.*  
 soldier NOM enemy BY kill- PASS-PST  
 ‘A soldier was killed by the enemy.’

Being a passive of an ordinary transitive sentence, (2) has a passive equivalent in English and other European languages, but passives like those in (1) do not. Ōtsuki says that translating (1b) as “I am departed by him” would be impossible.

There are also some transitive-based passives in Japanese that are systematically missing from English. Examples like (3) are a case in point, where the internal argument of the base verb is realized as the accusative object rather than as the derived subject.

- (3) *Zyunko ga ototo ni nikki o yom-are-ta.*  
 Junko NOM brother BY diary ACC read-PASS-PST  
 Lit. ‘Junko was read her diary by her brother.’

In this chapter, passives like (3) will be referred to as “Object-retaining Passives” or “OBJ-Passives”. Adopting the standard terminology of Japanese linguistics (see, for instance, Inoue 1976 and Teramura 1982), ordinary passives like (2) will be called “Direct Passives”. Passives like those in (1) will be referred to as “Intransitive-based Passives” (or “INTR-Passives”). INTR-Passives and OBJ-Passives will be collectively called “Indirect Passives”, again a standard practice. Shibatani (1990: 326) characterizes Direct Passives as “valency-decreasing” and Indirect Passives as “valency-increasing”. According to this characterization, it is the “valency-increasing” property that is common to INTR-Passives and OBJ-Passives and justifies their grouping as Indirect Passives. In (1a), for instance, it is the child who cried, not the mother, and in (3), Junko’s brother read her diary, and Junko neither read it nor “was read” by her brother. It is precisely this class of “valency-increasing” Passives that English

<sup>3</sup> I quote Ōtsuki’s remarks here in English translation.

systematically prohibits (note that *John was given a watch by Mary* is possible in English because the verb *give* is ditransitive and the passive here is a variant of the Direct Passive).

Since the Direct Passive in Japanese looks very much like the most typical kind of passives widely observed across languages, one may simply treat it on a par with them, letting the Japanese Direct Passive fall under whatever “universal characterization of passive” one assumes, such as DEMOTION followed by PROMOTION<sup>4</sup> or any other analysis to that effect. Within the early transformational framework, some scholars assumed an appropriately modified version of the Passive Transformation for the Japanese Direct Passive, and assumed that Indirect Passives constitute a different phenomenon that should be analyzed differently. Other scholars claimed that Direct and Indirect Passives should be analyzed in essentially the same manner. The latter approach is called the “uniform theory” of Japanese passives and the former the “non-uniform theory”. Classic work representing these theories includes Kuroda (1965) and Howard and Niyekawa-Howard (1976) (uniform theory) and McCawley (1972) and Kuno (1973) (non-uniform theory). In both theories, the analysis of Indirect Passives usually takes the form of assuming that the passive morpheme *-rare* is essentially a verb with its own semantic arguments, now often called the AFFECTEE role and the EVENT role, the latter being realized as a complement clause and the former licensing the appearance of the “extra noun phrase” functioning as the subject of the entire construction. The following structure illustrates this analysis where “CLS” stands for some clausal constituent.

- (4)  $[_{CLS_1} NP_1 [_{CLS_2} NP_2 [_{VP} NP_3 V_2]] [_{V_1} rare]]$

Because this is a regular complement clause structure, semantic roles determined by the complement verb are distributed within the domain of  $CLS_2$  in a completely regular manner, exactly as in a simple transitive clause. Since there is nothing in this analysis that prevents an intransitive verb from heading the complement clause as in (5), it also explains the existence of INTR-Passives in a natural manner.

- (5)  $[_{CLS_1} NP_1 [_{CLS_2} NP_2 [_{VP} V_2]] [_{V_1} rare]]$

Although Indirect Passives are treated in essentially the same way in the two theories, the uniform theory crucially claims that Direct Passives, instead of being derived by a “permutation transformation”, should also be analyzed as having a complement clause structure. On this conception, an example of a Direct Passive like (2) would also have the structure shown in (4) like an Indirect Passive but,

<sup>4</sup> DEMOTION, that is, of the active subject to “oblique,” which may be followed by PROMOTION (of the active object to the subject of the passive). For earlier discussion, see Comrie (1977), Chomsky (1981), Bresnan (1982), and Perlmutter and Postal (1983).

differently from Indirect Passives, the internal argument of the embedded verb is identical with the argument of the matrix passive verb, as schematically shown in (6).

- (6) [CLS<sub>1</sub> [NP<sub>1</sub> *soldier*] [CLS<sub>2</sub> [NP<sub>1</sub> *enemy*] [VP [NP<sub>3</sub> *soldier*] [V<sub>1</sub> kill]]] [V<sub>2</sub> PASS]]

In the “Standard Theory” framework, the Direct Passive (2) is derived from (6) by deleting NP<sub>3</sub> under identity with NP<sub>1</sub>, an idea which has been implemented in various ways according to the theoretical assumptions one makes (see Huang 1999 for an informative review and a detailed analysis of Indirect Passives from a cross-linguistic/cross-dialectal perspective).

Looking back on the history of Japanese linguistics, the analysis of Japanese passives can be said to have started as a uniform theory. Ōtsuki (1897, volume I: 110) lists all the types of passives discussed so far as a single construction, identifying the property common to all of them, namely that the “original agent” of the base verb is marked by the particle *ni* ‘BY’ in the passive. Ōtsuki then gives a pair of active and passive sentences of the following sort.

- (7) a. *X ga Y o koros-u.*  
       X NOM Y ACC kill-PRS  
       ‘X kills Y.’
- b. *Y ga X ni (onore o) koros-are-ru.*  
       Y NOM X BY (SELF ACC) kill-PASS-PRS  
       ‘Y is killed (himself<sub>ACC</sub>) by X.’

The reflexive pronoun *onore* in (7b) is a literary word largely corresponding to the more colloquial, and perhaps better-known, word *zibun* ‘SELF’. In Ōtsuki’s book, *onore o* is parenthesized and printed in smaller fonts than used for the other parts of (7b), which I take to mean that it is his “analysis” of (7b) and not strictly a part of the example sentence. (7b) is therefore understood to be a DIRECT passive analyzed as abstractly having a pronominal element in the object position which is coreferential with the subject, and this analysis is clearly in the spirit of the uniform theory.<sup>5</sup> Simply replacing the reflexive pronoun with an ordinary noun such as *musuko* ‘son’, one gets the following, which is a good example of an Indirect passive.

<sup>5</sup> Examples such as the following are highly unusual and would probably be regarded as impossible by Japanese speakers.

(i) \*?*Taroo ga Hanako ni zibun o koros-are-ta.*  
       Taro NOM Hanako BY self Acc kill-PASS-PST  
       (Lit.) ‘Taro was killed himself by Hanako’,

For some discussion of the theoretical status of (i) and similar examples in Modern Japanese, see Washio (2005: 19).

- (8) *Y ga X ni musuko o koros-are-ru.*  
 Y NOM X BY son ACC kill-PASS-PRS  
 Lit. ‘Y is killed his son by X.’

Ōtsuki (1889) can therefore be regarded as a pioneer of the uniform theory of Japanese passives in the history of Japanese linguistics. As already mentioned in section 1 above, Ōtsuki (1889) was also the first to treat passives and causatives in a parallel fashion, subsuming both of them under the grammatical notion “voice”. Prototypical passives and causatives in English (such as BE-passives and MAKE-causatives) do not strike one as similar to each other, either formally or semantically. It is therefore understandable that English linguistics has no tradition of speaking of the “causative voice” comparable to the commonly used expression “passive voice”. In Japanese, however, passives and causatives are visibly similar especially because of the existence of Indirect Passives like (8). Compare it with the causative sentence given in (9), which looks identical with (8) except that it has the causative morpheme *-(s)ase-* instead of the passive *-(r)are-*.

- (9) *Y ga X ni musuko o koros-ase-ru.*  
 Y NOM X BY son ACC kill-CAUS-PRS  
 Lit. ‘Y makes/lets X kill his son.’

In fact, (8) and (9) are superficially distinguished only by a single sound (*r* vs. *s* in *-are/-ase*). Furthermore, the similarity between (8) and (9) goes beyond the visible formal properties. As observed by Yamada (1908) and later linguists, most notably by Teramura (1982), Indirect Passives like (8) and Causatives like (9) can both be analyzed as conceptualizing an indirect “affectedness” relation between a Person (*Y*) and an Event (with *X* as the agent), the only difference between them being the “direction” of affectedness: the Event affects *Y* in (8) whereas *Y* affects the Event in (9), leading, respectively, to the passive interpretation and the causative interpretation. Simplifying Teramura’s (1982: 289) suggestions, these affectedness relations may be represented as [*Y* ← Event] for (8) and [*Y* → Event] for (9) which do seem to help grasp the intuitively felt relatedness between Indirect Passives and Causatives in Japanese. As will be discussed in the following sections, however, there is a special kind of affectedness involved in Japanese Indirect Passives that makes them almost unique among the passives in the world’s languages.

## 2.2 Adversity and the “exclusive” passives in Japanese

Of the types of Japanese passives given by Ōtsuki, the following deserves special mention (Ōtsuki 1897, volume I: 110).



- (10) *Heike wa Genji ni sono hei o Hiyodorigoe ni*  
 Heike TOP Genji BY that soldier ACC (a mountain slope) DAT  
*mawas-are-ta.*  
 send-PASS-PST

‘Heike was adversely affected by Genji’s sending their soldiers to Hiyodorigoe.’

This is about a famous battle in Japanese history, the battle between the Genji family and the Heike family in the twelfth century. In this battle, Genji launched a surprise attack on the Heike unit from behind it by sending their soldiers to a mountain slope called Hiyodorigoe. Otsuki’s example describes this incident by the passive construction with Heike as the subject. Although the event which actually took place is simply that Genji sent their soldiers to Hiyodorigoe, of which Heike is no part, (10) nevertheless conveys the idea that Heike was adversely affected by that event. How the passive construction acquires this sense of adversity still needs to be investigated, but previous work dealing with this matter, including in particular Wierzbicka (1979), Kuroda (1979), Oehrle and Nishio (1981), Kuno (1983), Washio (1993), and Ohshima (2003), discuss some pertinent generalizations. Wierzbicka (1979: 128) says, for instance, that “Japanese treats actions which affect us without involving us in one way and those which both affect and involve us another” and “adversity” is a phenomenon typically observed in the former case. Ōtsuki’s example given in (10) seems to fit well with Wierzbicka’s notion: Genji’s action affects Heike without involving Heike. Crosslinguistically, passive constructions that can encode this kind of highly indirect relation are extremely rare. Even a language like Korean, which has OBJ-Passives similar to those in Japanese, can never express the kind of semantic relation observed in (10).

To illustrate Wierzbicka’s insight with somewhat different notions, consider the event “Mao cut Yuzu’s hair”, which can be described both in Japanese and Korean by an OBJ-Passive with *Yuzu* represented as the subject, as in (11a) [Japanese] and (11b) [Korean].

- (11) a. *Yuzu ga Mao ni kami o kir-are-ta.* [J]  
 Yuzu NOM Mao BY hair ACC cut-PASS-PST  
 b. *Yuzu ka Mao eykey meli lul kkakk-i-ess-ta.* [K]  
 Yuzu NOM Mao BY hair ACC cut-PASS-PST-DEC  
 ‘Yuzu had his hair cut by Mao.’

(11a) and (11b) share the passive sense expressed by the English translation ‘Yuzu had his hair cut by Mao’. (11a) and (11b) are crucially different, however, in that the direct object *kami* ‘hair’ in the Japanese example can be interpreted not only as “Yuzu’s hair”, but also as “Mao’s hair”. Under the latter interpretation, (11a) describes the event “Mao cut *her own* hair”, of which Yuzu is no part; nevertheless,

Yuzu is interpreted as being affected by this event, and the affectedness here is felt to be strongly “adversative”. The two interpretations (11a) allows for can be schematically represented as in (12), where “E” stands for “Event”, the arrow represents an affectedness relation, and the italics (like *YUZU* and *HAIR* in (12a)) indicate a “possessive” relation, the *HAIR* being understood as *YUZU*’s hair in this case.

- (12) a.  $[E_1 [YUZU] \leftarrow [E_2 MAO \text{ CUT } HAIR]]$   
 b.  $[E_1 [YUZU] \leftarrow [E_2 MAO \text{ CUT } HAIR]]$

In (12a), Yuzu is affected by the event, of which he is a part, Yuzu being the possessor of the hair. This is the kind of affectedness relation the OBJ-Passives typically express both in Japanese and Korean (call them “inclusive” passives). In (12b), by contrast, Yuzu is affected by the event, of which he is no part, Yuzu being completely “excluded” from E2. Japanese passives like (11a) can express even this kind of affectedness relation (call them “exclusive” passives). It appears that “exclusive” passives always acquire a strongly “adversative” sense. Ōtsuki’s (1897) example given in (10) above is also an “exclusive” passive in this sense.

From the perspective of the “inclusive/exclusive” distinction, passives based on intransitive verbs are almost by definition “exclusive”, and it is well-known that they are almost always “adversative”.<sup>6</sup> In an INTR-Passive like (13a), for instance, Yuzu is interpreted as being adversely affected by the event “Mao cried”. As represented in (13b), Yuzu is “excluded” from E2 in the above sense.

- (13) a. *Yuzu ga Mao ni nak-are-ta.* [J]  
           Yuzu NOM Mao BY cry-PASS-PST  
           (Lit.) ‘Yuzu was cried by Mao.’  
 b.  $[E_1 [YUZU] \leftarrow [E_2 MAO \text{ CRY}]]$

<sup>6</sup> A notable exception to this generalization is a passive based on the verb *huk-* ‘to blow (said of wind)’ such as the following.

- (i) *Boku wa kaze ni huk-are-ta.*  
       I TOP wind BY blow-PASS-PST  
       ‘I was blown by the wind.’

Examples like (i) are widely regarded as INTR-Passives but they are nevertheless susceptible of non-adversative interpretation. A major reason for treating (i) as an INTR-Passive is that the verb *huk-* has no such transitive use as the following.

- (ii) \**Kaze ga boku o hui-ta* (<*huk-ta*).  
       wind NOM I ACC blow-PST  
       ‘The wind blew me.’

Despite the impossibility of (ii), however, it is possible to analyze (i) as a kind of Direct Passive, thereby explaining its non-adversative interpretation in a straightforward manner. For various suggestions along this line, see Harada (1977), Shibatani (1990), and Washio (2008) *inter alia*.

Like transitive-based “exclusive” passives, INTR-Passives are never possible in Korean and many other languages (see section 3.3 below for further discussion). Since INTR-Passives are “exclusive” by nature, it is precisely in the notion “exclusive passive” that the source of the uniqueness of Japanese passives is located.

## 2.3 The “voice complex” in Japanese

As observed in the previous sections, passive and causative constructions in Japanese share some important properties. The passive and causative SUFFIXES in Japanese (or “auxiliary verbs” as they are generally called in traditional and school grammars) also display some important similarities that distinguish them from other suffixes. For instance, in a sequence of suffixes and other elements following a verb stem, they must appear nearest to the verb stem, not being able to follow any other elements. This can clearly be seen in Classical Japanese which was more abundant in verbal suffixes than Modern Japanese. The following example is from *Makura no sōshi* [The Pillow Book of Sei Shōnagon] dating from around 1000.

- (14) *mituke-rare-ni-keru-kana.*  
 find-PASS-PRF-PST-PART  
 ‘(It is indeed annoying) to have been noticed.’

In (14), the passive suffix *-rare-* is directly attached to the verb. The suffix *-ni* following it is generally referred to as an auxiliary of “Perfect”. The suffix which appears as *-keru* in (14) has been referred to as an auxiliary of “Past” (Ōtsuki 1897) or “Retrospective” (Yamada 1908, Vovin 2003). The rightmost element *-kana* is a clause-final particle which “is used to show the emotional attitude of a speaker” (Vovin 2003: 436). Finally, the verb *mituke-* ‘find’, ending in the vowel *e*, is related to the verb *mituk-* ‘be found’ as the transitive member of the transitive-intransitive pair *mituke-/mituk-*. Thus, the order of elements observed in (14) is largely in accord with the following, which Bybee (1985: 4–5) suggests on the basis of her crosslinguistic research:

- (15) Valence – Voice – Aspect – Tense – Mood

When the causative suffix *-(s)ase-* is involved in this sequence, it also occupies the place of Voice, as in *kik-ase-te-keri* (hear-CAUS-PRF-PST) ‘[I] have let [him] know [it].’ also from *The Pillow Book* (cited in Yamada 1913: 229). Essentially the same order as above may be assumed for Modern Japanese (Shibatani 1990: 307).

The position marked Voice in Bybee’s sequence may be occupied by the causative suffix and the passive suffix at the same time, in which case the order is generally *-sase-rare-* ‘causative-passive’. The reverse order, *-rare-sase-* ‘passive-causative’, has

been described as “impossible” in some very influential grammars of Japanese such as Bloch (1946) and Martin (1975), a tradition of description probably going back to Chamberlain (1888: 193), who says that “though Japanese [...] has passive forms of the causative, it has no causative forms of the passive.” Ōtsuki’s grammar allows this order, however. He cites *ut-are-sim-* ‘hit-PASS-CAUS-’ (1889: 45), a Classical Japanese example corresponding to *ut-are-sase-* ‘hit-PASS-CAUS-’ in Modern Japanese. Saiki and Washio (2012b) reconstructed a largely unknown history of the descriptions along the lines of Ōtsuki’s grammar, observing that there have been some grammarians for whom the causative forms of the passive in Japanese are not altogether impossible. Such grammarians, though a minority, include historical and famous figures like Yamada (1908: 976) (*mi-rare-sase-* ‘see-PASS-CAUS-’), Matsushita (1924: 321) (*mom-are-sase-* ‘rub-PASS-CAUS-’; see the example given in (16) below), Mitsuya (1926: 200) (*dak-are-sase-* ‘hold-PASS-CAUS-’, *kuw-are-sase-* ‘bite-PASS-CAUS-’) and, in modern linguistics, Inoue (1976: 62, 152) (*hik-are-sase-* ‘run over-PASS-CAUS-’, *but-are-sase-* ‘hit-PASS-CAUS-’) though Inoue adds that “judgments may vary from speaker to speaker” (Inoue 1976: 152).

These observations on the possible causative-passive interactions in Japanese are directly relevant to an important issue of modern linguistics because scholars have spoken of “the restriction against causatives of passives in a large number of languages” (Dowty 1979: 293) or even claimed that “perhaps in all languages, no causativization of passive constructions is possible” (Vitale 1981: 172). The latter claim is clearly too strong since there are languages that have been reported to allow that possibility (see in particular Baker 1988 where a highly interesting typology is suggested regarding the different patterns of causative-passive interactions in different languages). The place of Japanese in such a typology is not very clear, however, since the fact remains that perfectly natural examples of causativized passives are not so easy to find or even to construct in Japanese, though some of the examples given by early grammarians sound quite natural, including the following, based on Matsushita’s (1924) example.

- (16) *Musuko o seken no aranami ni mom-are-sase-ru.*  
 son ACC world GEN rough waves BY rub-PASS-CAUS-PRS  
 ‘(I will) let my son be buffeted about in the hardships of the world.’

As Saiki and Washio (2012b) observe, however, it is typically the case that natural examples like (16) have no well-formed active counterparts to begin with. (17), for instance, is nearly impossible.

- (17) \*?*Seken no aranami ga musuko o mom-u.*  
 world GEN rough waves NOM son ACC rub-PRS  
 (lit.) ‘The rough waves of the world rub my son.’

The ill-formedness of (17) is partly due to the combination of the inanimate subject and the verb *mom-*, a transitive verb which literally means ‘to rub, massage’ and, by extension, ‘to give someone training’. Despite the form *mom-are-* ‘be buffeted’ in (16), then, no “Passive Conversion” is involved here. Probably for this reason, it has no problem undergoing a regular process of causativization since the resulting final clause would involve only one “Voice Conversion” in its derivation.<sup>7</sup> Saiki and Washio (2012b) discuss other possible conditions under which causativized passives in Japanese are permitted as well as some problems that remain to be investigated.

### 3 Causatives and the typology of passive expressions

Roughly speaking, Japanese has both Direct and Object-retaining Passives whereas English has only Direct Passives, never allowing things like *\*John was read his diary by Mary*. What is it about the Japanese passive, then, that allows exactly that? The voice systems of Korean and other languages may shed light on this question.

#### 3.1 Comparing passives in Korean and Japanese

Korean has the following five types of passive formation. Type I, the HI-Passive, based on *-hi-* (with variants *-i-*, *-li-*, *-ki-*) which is suffixed to a verb root; Type II, the CI-Passive, based on *-ci-* which combines with the infinitive form of a verb; Type III, the TOY-Passive, based on *-toy-* which combines with a noun to derive a passive verb; Type IV, the PAT-Passive, based on *-pat-* which combines with a noun to derive a passive verb; Type V, the TANGHA-Passive, based on *-tangha-* which combines with a noun to derive a passive verb.

When one translates Japanese passives into Korean, one must therefore determine for each case which one of the five types is appropriate. For example, Japanese uses the same suffix *-(r)are* in all of (18a)–(18e), but their Korean equivalents are formed in five different ways.

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<sup>7</sup> The same applies to the following and other similar cases.

(i) *Osiego o taki ni ut-are-sase-tai!*  
 one's student ACC waterfall BY beat-PASS-CAUS-want  
 ‘(I) want to make my student be beaten by a waterfall!’

Here again, the active form *\*Taki ga osiego o ut-u.* (waterfall NOM one's student ACC beat-PRS) ‘The waterfall beats my student’ is impossible.

(18)	Japanese	Korean	Meaning
a.	yom- <i>are</i> -	Type I: ilk- <i>hi</i> -	'be read'
b.	osie- <i>rare</i> -	Type II: kaluchye- <i>ci</i> -	'be taught'
c.	hookokus- <i>are</i> -	Type III: poko- <i>toy</i> -	'be reported'
d.	sonkeis- <i>are</i> -	Type IV: conkyeng- <i>pat</i> -	'be respected'
e.	kyookatus- <i>are</i> -	Type V: kongkal- <i>tangha</i> -	'be blackmailed'

The five devices illustrated in (18) all produce good Direct Passives, but with (18a), (18d) and (18e), passives with a retained accusative object are also possible – something that is never possible with (18b) and (18c). The following example is based on the transitive verb *kkakk*- 'cut', from which the passive verb *kkakk-i*- 'be cut' is derived by the Type I device (a similar example has already been cited in (11b)).

- (19) *Chelswu ka Yenghuy eykey meli lul kkakk-i-ess-ta.*  
 Chelswu NOM Yenghuy BY hair ACC cut-PASS-PST-DEC  
 Lit. 'Chelswu was cut his hair by Yenghuy.'

Observe that the internal argument ('hair') of the base verb *kkakk*- 'cut' is realized in (19) as the accusative object exactly as in OBJ-Passives in Japanese.

Since Type II is productive in Korean, it may equally be used to passivize the verb *kkakk*- 'cut' to produce the passive form *kkakka-ci*- 'be cut'. The following Direct Passives are both possible.

- (20) a. *Aitul uy moli ka ccalpkey kkakk-i-ess-ta.* (Type I)  
 children GEN hair NOM short cut-PASS-PST-DEC  
 b. *Aitul uy moli ka ccalpkey kkakka-ci-ess-ta.* (Type II)  
 children GEN hair NOM short cut-PASS-PST-DEC  
 'The children's hair was cut short.'

With the *ci*-based Type II passive, however, no retention of the accusative object is possible as can be observed from the following and many other examples.

- (21) \**Chelswu ka Yenghuy eykey meli lul kkakka-ci-ess-ta.*  
 Chelswu NOM Yenghuy BY hair ACC cut-PASS-PST-DEC  
 (Lit.) 'Chelswu was cut his hair by Yenghuy.'

The three devices of passive formation illustrated in (18c-e) all derive a passive verb from a verbal noun. Of these, Type V allows both Direct Passives (as in (22a) below) and OBJ-Passives (with an accusative object as in (22b)).

- (22) a. *Ku uy ceyan i hoyuy eyse kecel-tanghay-ss-ta.*  
 he GEN proposal NOM meeting at rejection-PASS-PST-DEC  
 'His proposal was rejected at the meeting.'
- b. *Ku nun hoyuy eyse ceyan ul kecel-tanghay-ss-ta.*  
 he TOP meeting at proposal ACC rejection-PASS-PST-DEC  
 (Lit.) 'He was rejected his proposal at the meeting.'

Similarly, Type IV also allows both Direct and Object-retaining Passives (space limitation does not allow me to cite actual examples, but they can easily be found in Korean texts).

In sharp contrast with Type IV and Type V, the *toy*-based Type III passive formation, which is the regular means of deriving passive verbs from Sino-Korean nouns, never allows the retention of the accusative object. Thus, replacing *tangha-* in (22) with *toy-*, only the Direct Passive version given in (a) remains acceptable, the OBJ-Passive version in (b) being impossible. Observe the contrast between (a) and (b) in the following examples which are exactly the same as (22a) and (22b) except for the choice of the passive-deriving morpheme.

- (23) a. *Ku uy ceyan i hoyuy eyse kecel-toy-ess-ta.*  
 he GEN proposal NOM meeting at rejection-PASS-PST-DEC  
 'His proposal was rejected at the meeting.'
- b. \**Ku nun hoyuy eyse ceyan ul kecel-toy-ess-ta.*  
 he TOP meeting at proposal ACC rejection-PASS-PST-DEC  
 (Lit.) 'He was rejected his proposal at the meeting.'

All the examples of Direct and Indirect Passives in Korean given so far are directly translatable into Japanese using the passive-deriving suffix *-(r)are*, but only Direct Passives are translatable into English using the *be*-Passive.

### 3.2 Two broad types of passives in Korean

Given that some types of passives in Korean allow only Direct Passives whereas other types allow both Direct Passives and OBJ-Passives, the question arises as to what distinguishes the two types of passives in Korean. As discussed in Washio (2005) and the references cited therein, there seems to be a fairly clear generalization here. Consider the passive-deriving morphemes *-ci-*, *-toy-*, *-pat-* and *-tangha-*, illustrated in (18) above. They are unmistakably related to independent LEXICAL verbs *ci-* 'become', *toy-* 'become', *pat-* 'receive', and *tangha-* 'hit, meet'. Of these, the latter two are TRANSITIVE verbs which are used in the following manner.

- (24) a. *Chinkwu ka cenpo lul pat-ass-ta.*  
 friend NOM telegram ACC receive-PST-DEC  
 'My friend received a telegram.'
- b. *Chinkwu ka sako lul tanghay-ess-ta*  
 friend NOM accident ACC meet-PST-DEC  
 'My friend met with an accident.'

On the other hand, *ci-* and *toy-* are both INTRANSITIVE verbs. Specifically, they are both verbs of BECOMING, which may be used as in (25b), corresponding to the Japanese example given in (25a).<sup>8</sup>

- (25) a. *Karera wa teki doosi ni nat-ta.*  
 they TOP enemy each other DAT become-PST  
 'They became enemies to each other.'
- b. *Kutul un selo wenswu ka {ci-/toy-}ess-ta. (= (25a))*  
 they TOP each other enemy NOM become-PST-DEC

In Korean, then, the transitive verbs *pat-* 'receive' and *tangha-* 'hit, meet' have developed a use as passive-deriving morphemes that allow both Direct and Object-retaining Passives whereas the intransitive verbs of BECOMING, *ci-* and *toy-*, have developed a use as passive-deriving morphemes that allow only Direct Passives. In other words, passives of INTRANSITIVE origin, or BECOME-type Passives, never allow the internal argument of the base verb to be realized as the accusative object. It is also suggestive that Germanic passives also involve a use of BECOME and they never allow OBJ-Passives. By contrast, passives of TRANSITIVE origin in Korean do allow the retention of an accusative object.

### 3.3 The causative/passive ambiguity

There is one more passive-deriving morpheme in Korean that needs to be discussed here, namely Type I, based on the suffix *-hi-* (with variants *-i-*, *-li-*, *-ki-*). Unlike the other four passive-deriving morphemes discussed above, which can easily be related to independent lexical verbs, the lexical origin of the suffix *-hi-* is difficult to determine because it was already a suffix in Middle Korean. Nevertheless, considerations of the sort given in this and the following sections strongly suggest that the suffix *-hi-* is essentially a morpheme which creates a TRANSITIVE clause.

<sup>8</sup> For both *ci-* and *toy-*, Japanese uses the same verb *nar-* 'become'. Japanese *nar-* and Korean *ci-/toy-* have different Case-marking on the argument corresponding to *y* in [*x* BECOME *y*], dative in Japanese but nominative in Korean. This kind of variation is not particularly surprising (note the Case-marking pattern of German *werden* 'become', for example).



We have so far spoken of *-hi-* as a passive morpheme but that is less than half the story because *-hi-* also functions as a CAUSATIVE morpheme. This means that the form “*V-hi-*” is potentially ambiguous between “*be Ved*” or “*cause to V*”. Consider (19) again. It was cited above as an OBJ-Passive, but the same string of words can also be interpreted as a causative. It may therefore be given the following analysis (which differs from (19) only in having the gloss CAUS for *-i-* in place of PASS).

- (26) *Chelswu ka Yenghuy eykey meli lul kkakk-i-ess-ta.* (= (19))  
 Chelswu NOM Yenghuy BY hair ACC cut-CAUS-PST-DEC  
 ‘Chelswu had his hair cut by Yenghuy.’

This kind of Causative/Passive ambiguity is very common across languages. In English, the *have*-construction displays a similar ambiguity as in the translation given in (26) *Chelswu had his hair cut by Yenghuy*. This sentence may therefore serve as the English translation of either (19) or (26).

It is also not uncommon for the causative construction to be used as a substitute for the passive construction when the latter is prohibited for some independent reasons. For instance, French generally disallows dative passives so that an English sentence like (27a) cannot be directly translated into French using an ordinary passive sentence such as (27b), but the sense intended in (27b) can be expressed by using the *faire*-Causative construction as in (27c).

- (27) a. *I was offered this skirt by my mother.*  
 b. \**J’ai été offert cette jupe par ma mère.*  
 c. *Je me suis fait offrir cette jupe par ma mère.*  
 I REFL be CAUS offer this skirt by my mother

Similarly, since French has no passives comparable to Japanese OBJ-Passives, (28a) has no such passive equivalent as (28b) in French, but the sense intended in (28b) may be expressed by using the *faire*-Causative sentence given in (28c) (Washio 1993: 59).

- (28) a. *Taroo ga torakku ni kuruma o tubus-are-ta.*  
 Taro NOM truck BY car ACC smash-PASS-PST  
 ‘Taro had his car smashed by a truck.’ (‘Taro’s car was smashed by a truck.’)  
 b. \**Jean a été broyé sa voiture par un camion.*  
 c. *Jean s’est fait broyer sa voiture par un camion.*  
 Jean REFL.be CAUS crush his car by a truck  
 ‘Jean had his car smashed by a truck.’ (‘Jean’s car was smashed by a truck.’)

What one observes here is an important relation between Direct Passives, Object-retaining Passives and Causatives, summarized in Table 1.

**Table 1:** Lack of OBJ-Passive in French complemented by *faire*-Causative

	Direct Passive	OBJ-Passive	Causative
Japanese	-rare-	-rare-	-sase-
French	<i>être V<sub>é</sub></i>	*	← (se) <i>faire</i>

As in English, the passive construction is restricted to Direct Passives in French, but the gap thus created can be filled by the Causative construction.

The same pattern is observed in Mongolian, which has separate causative and passive suffixes, *-uul-* ‘CAUS’ and *-gd-* ‘PASS’, largely corresponding to the Japanese suffixes *-sase-* and *-rare-*, respectively. (29a) is a Direct Passive in Japanese and (29b) its Mongolian equivalent based on the passive morpheme (*-gd-*) (Washio 1995: 128).

- (29) a. *Boku wa sensei ni nagur-are-ta.*  
 I TOP teacher BY hit-PASS-PST  
 ‘I was hit by the teacher.’  
 b. *Bi bagšid zančigdav.*  
 I teacher.BY hit.PASS.PST

Since Japanese has OBJ-Passives, (29a) may be extended to (30a) by including an accusative-marked direct object in it, but such extension is generally impossible in Mongolian, (30b) being judged “almost impossible” by Mongolian speakers (example from Washio 1993: 64). In (30b), *nüür* ‘face’ has the reflexive marking (as should be most natural in cases like this, according the rules of Mongolian grammar). Using the simple accusative form instead of the reflexive form does not improve (30b).

- (30) a. *Boku wa sensei ni kao o nagur-are-ta.*  
 I TOP teacher BY face ACC hit-PASS-PST  
 ‘I was hit in the face by the teacher.’  
 b. ??*Bi bagšid nüüree zančigdav.*  
 I teacher.BY face.REF hit.PASS.PST

The idea which (30b) means to express can be expressed in Mongolian by the following CAUSATIVE sentence (Washio 1993: 64).

- (31) *Bi bagšaar nüüree zančuulav.*  
 I teacher.INS face.REF hit.CAUSE.PST

Thus, the Mongolian passives based on the morpheme *-gd-* ‘PASS’ cannot form OBJ-Passives, but the gap thus created is filled by the causatives based on the morpheme *-uul-* ‘CAUS’. Since this is a general phenomenon in Mongolian, Table 1 given above can be expanded to include Mongolian as in Table 2.

**Table 2:** Lack of OBJ-Passive in Mongolian complemented by *uul*-Causative

	Direct Passive	OBJ-Passive		Causative
Japanese	<i>-rare-</i>	<i>-rare-</i>		<i>-sase-</i>
French	<i>être Vé</i>	*	←	( <i>se</i> ) <i>faire</i>
Mongolian	<i>-gd-</i>	*	←	<i>-uul-</i>

One can further expand Table 2 to include other languages that display the same pattern such as English which, as already mentioned, has no passive equivalent of Japanese OBJ-Passives such as (32a) but the gap created by (32b) can be filled by the *have*-Causative sentence given in (32c).

- (32) a. *Sensei ga gakusei ni ronbun o hihans-are-ta.*  
           teacher NOM student BY article ACC criticize-PASS-PST  
       b. \**The teacher was criticized his article by the students.*  
       c. *The teacher had his article criticized by the students.*

Table 2 may also be expanded in a different way since it is not always the Causative construction that fills the gap (\*) in Table 2. Consider the following French example, often cited in grammar books and dictionaries.

- (33) *Elle s'est vu refuser l'entrée du club.*  
       she REFL.be seen refuse entrance of-the club  
       ‘She was refused admission to the club.’

As is well-known in French linguistics, this construction is similar to the *faire*-Causative construction discussed above in that it can express a passive idea, something close to the English translation given in (33). The main verb of this construction is not a causative verb, however. Rather, it is *voir* ‘to see’, a perception verb. Though *voir* is not a causative verb, it is still a transitive verb, and it seems that a construction must be of a TRANSITIVE origin in order to function as a filler of the gap in Table 2. Similarly, verbs of RECEIVING often develop a construction that is ambiguous between passive and causative readings, and it typically fills the gap created by the lack of OBJ-Passives in the language. The German construction based on *kriegen*,

which is generally interchangeable with *bekommen*, both meaning ‘to receive’ or ‘to get’ is a case in point, as is the English construction based on *get*.

- (34) a. *Wir kriegen die Gläser gewaschen.*  
           we get the glasses washed  
           ‘We get the glasses washed.’  
           (Heider 1984: 38)
- b. *Er kriegte seine Miete von der Firma bezahlt.*  
           He got his rent by the firm paid  
           ‘He got his rent paid by the firm.’  
           (Siewierska 1984: 132)

The kind of Causative/Passive ambiguity observed in (34a) is also known in Chinese, but it is a construction based on *gěi*, a verb of GIVING rather than RECEIVING, that gives rise to the ambiguity in Chinese.

### 3.4 The unidirectionality of Voice Extension

The actual processes of the kind of semantic extension discussed in the previous section may vary from case to case, or from language to language (see Givón and Yang 1994 for the English *get*-construction and Kimura 2008 for the Chinese *gěi*-construction), but the direction of extension seems to be uniform across languages, suggesting a generalization that may be stated as follows.

- (35) *Unidirectionality of Voice Extension*  
       Across languages, Causative and other transitive constructions easily turn to Passive expressions but Passive constructions rarely, if ever, turn to Causative expressions.

With this generalization in mind, let us return to the status of the Type I *hi*-Passive with respect to the other four types of passive-formation in Korean. The verbal complex “*V-hi-*” can now be analyzed as basically forming a causative construction which also permits a passive interpretation rather than the other way around. This would group the HI-Passive, the PAT-Passive and the TANGHA-Passive together as “Passives of Transitive Origin”, contrasting with the other group, consisting of the CI-Passive and the TOY-Passive which were referred to above as “Passives of Intransitive Origin” or the BECOME-type Passives. This dichotomy of passives in Korean correlates with the possibility or impossibility of OBJ-Passives in the following manner.

- (36) Passives of Transitive Origin can form OBJ-Passives but Passives of Intransitive Origin cannot.

This generalization seems to hold true for Mongolian, French, and other languages discussed above.

As stated in (36), the passive construction derived from a Causative/Transitive construction is typically capable of retaining the direct object of the input verb, but it is also capable of forming a passive expression without such an object, which gives rise to the kind of phenomenon one observes in the following pair of French examples.

- (37) a. *Elle s'est fait arrêter par la police.*  
           she REFL.be CAUS arrest by the police  
       b. *Elle a été arrêtée par la police.*  
           she has been arrested by the police  
           'She was arrested by the police.'

The sentence given in (37a) is a Causative-based passive expression, semantically very close to the sentence given in (37b) which is an ordinary *être*-Passive in French.

Essentially the same pattern is observed in Mongolian. (38a) is a *uul*-Causative sentence which naturally has a causative sense, but it can also be interpreted in much the same way as (38b), an ordinary *gd*-Passive in Mongolian (Washio 1995: 146–147).

- (38) a. *Bi ter bagšaar zančuulav.*  
           I that teacher.INS hit.CAUS.PST  
       b. *Bi ter bagšid zančigdav.*  
           I that teacher.DAT hit.PASS.PST  
           'I was hit by that teacher.'

It is therefore not surprising to observe that the Korean morpheme *-hi-* also produces sentences like (20a), which is a Direct Passive semantically very close to (20b), a productive *ci*-based passive.

All these observations point to the following property of the Japanese passive as distinctly "Japanese": the *rare*-Passive is capable of forming OBJ-Passives *but it does not appear to have been derived from Causative or any other Transitive constructions*, quite unlike what one observes in other languages. In fact, most of the previous theories of the historical origin of the Japanese passive claim that the suffix *-rare-* has developed from some such intransitive verb as *aru* 'become' or *ari* 'be' (both Old Japanese verbs) or that, without being committed to the specific origin of

the suffix, the passive *rare*-construction has developed from the “spontaneous” *rare*-construction, the latter obviously being intransitive. But theories like these make it all the more difficult to understand why *-rare-* is capable of forming OBJ-Passives.

### 3.5 On the origin of Japanese passives

If the majority view on the origin of the Japanese passive construction that it is a development from some intransitive construction is correct, then this original intransitive construction must have developed, first, into the Direct Passive construction which does superficially look intransitive, and then the Direct Passive somehow developed into the OBJ-Passive. Schematically, the development of the OBJ-Passive must have followed the course (39a) → (39b) → (39c).

- (39) a. NP<sub>1</sub>-NOM V<sub>INTR</sub>  
       b. NP<sub>1</sub>-NOM NP<sub>2</sub>-BY \_\_\_\_\_<sub>1</sub> V<sub>TR</sub>-PASS  
       c. NP<sub>1</sub>-NOM NP<sub>2</sub>-BY NP<sub>3</sub>-ACC V<sub>TR</sub>-PASS

The first step, (39a) → (39b), is plausible enough. After all, passives in many languages are known to have developed from some intransitive constructions. As already discussed, however, the second step, (39b) → (39c), is extremely rare to say the least. It would correspond to such hypothetical situations as the *ci*-Passive or the *toy*-Passive in Korean or the *être*-Passive in French developing into OBJ-Passives like *John was read his diary by Mary*, which they never did.

Looking back, again, on the history of Japanese linguistics, one would notice that there was once a theory, almost forgotten now, that the Japanese passive developed from a Transitive construction (Ishida 1958). Ishida first assumes with others that the older form of the passive morpheme *-re-* developed from the still older morpheme *-ye-* (attested in Old Japanese), and then suggests that this passive morpheme *-ye-* developed from the lexical verb *e-* ‘to get’, a Transitive verb still in much use in Modern Japanese. If something like this etymology is correct, then the Japanese passive would look much less peculiar than before. For some reason (not very clear to the present author), however, previous reviews and overviews of the history of ideas related to the origin of the Japanese passive have largely ignored Ishida’s GET theory (see Washio 2005: 16 for documentation). Probably, Yoshida (1973) was the last work mentioning Ishida’s theory until it was brought up again and defended by Washio (2005), so that its details, and its implications for the modern theory of Passive and Voice, have not been fully worked out yet in the field of Japanese linguistics. Given, however, that it is a theory potentially compatible with the “uniform theory” of Japanese passives and that gives us hope of abandoning the crosslinguistically unusual development described above as “(39b) → (39c)”, Ishida’s

GET theory seems to be very much worth pursuing (for some general discussion of this and other related issues, see also Washio 2010, on which the foregoing discussion is partly based).

## 4 Prospects: historiographical and descriptive

From the perspective of Japanese contrastive linguistics, it would be desirable to have a typology of Japanese passives that captures the similarities and differences between Japanese and other languages. At the outset of section 3, I said: “Japanese has both Direct Passives and Object-retaining Passives whereas English has only Direct Passives”. It has been known at least since Yamada (1908), however, that Direct Passives in European languages are not simply translatable into Japanese Direct Passives. Yamada (1908: 373) correctly observes, for example, that one cannot translate the German Direct Passive in (40a), or its English equivalent for that matter, into Japanese using a Direct Passive such as (40b).

- (40) a. *Die Brücke ist von meinem Freunde gebaut worden.*  
           the bridge be by my friend built become  
           ‘The bridge has been built by my friend.’
- b. \**Sono hasi wa watasi no yuuzin ni tukur-are-ta.*  
           the bridge TOP I GEN friend BY build-PASS-PST  
           ‘The bridge was built by my friend.’

The unacceptability of (40b) reflects a rather general property of Japanese passives not mentioned so far in this chapter. Namely, if the subject of a passive sentence is inanimate (“the bridge”), then the presence of a *ni*-marked animate agent (“my friend-BY”) often makes the sentence unacceptable. Deleting the *ni*-marked agent and replacing it with some appropriate adverbial such as “in the Nara period” as in (41a), or replacing the agent-marker *-ni* with a different particle *-ni yotte* ‘by means of’ as in (41b), often makes the sentence acceptable.

- (41) a. *Sono hasi wa Nara zidai ni tukur-are-ta.*  
           the bridge TOP Nara period in build-PASS-PST  
           ‘The bridge was built in the Nara period.’
- b. *Sono hasi wa watasi no yuuzin ni yotte*  
           the bridge TOP I GEN friend BY-MEANS-OF  
           *tukur-are-ta.*  
           build-PASS-PST  
           ‘The bridge was built by my friend.’

Observations like this lead Matsushita (1930) to propose a new classification of Japanese passives into the “Simple Passive” and the “Passive of Interest”. The former refers to a passive like (40b) above with the *ni*-marked agent deleted or with the particle *-ni* replaced by *-ni yotte*, a particle which Matsushita analyzes as forming an adverbial phrase of means/medium. Matsushita further observes that the Simple Passive is not a natively pure Japanese expression: it began to be used as a way of directly translating European passives, a point elaborated by Kinsui (1991), who observes that passives like (41b), with the agent marked by *-ni-yotte* rather than by *-ni*, began to be used in the nineteenth century as a way of directly translating Dutch texts into Japanese, the expression *-ni-yotte* having been chosen as the translation equivalent of the Dutch preposition *door*.<sup>9</sup>

Typically, then, purely Japanese passives have an animate subject, the original agent marked by the particle *-ni*. They are all “Passives of Interest”, regardless of whether a syntactic object is present or absent, or whether the base verb is transitive or intransitive. The syntactic subject of a purely Japanese passive is always interpreted as being somehow “affected”, in the sense in which the subject of a European passive is not, yielding a general contrast of the sort observed in (40).

So Matsushita treats Direct and Indirect Passives in a uniform way, calling them “Passives of Interest”, but adds to this picture a new class of passives called “Simple Passives” which developed relatively recently in the history of Japanese under the influence of European passives. At least in spirit, this is the same distinction that S.-Y. Kuroda (1979) would later draw between the NI-Passive and the NI-YOTTE Passive in his now famous and influential paper. How the purely Japanese passives came to have the properties they actually have remains to be investigated, but this question invites us again to examine the theories about the origin of Japanese passives such as the GET-theory, mentioned above, which seems to be compatible with the Matsushita/Kuroda classification of Japanese passives.

In this chapter, I have stressed the importance of the observations made by the Japanese grammarians of the late nineteenth and early twentieth centuries, and their relevance to modern Japanese contrastive linguistics. Observations of equal importance are also found in the early grammars of Japanese written by some European scholars, most notably Hoffmann (1868) and Chamberlain (1888). Previously written histories of Japanese linguistics usually mention their work but mostly fail to appreciate the importance of their “contrastive linguistic” descriptions of Japanese. Let me cite here one such description from Chamberlain (1888: 250): “Inanimate objects are rarely, if ever, personified. [...] it goes so far as almost to prohibit the

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<sup>9</sup> Kinsui (1991: 10) also suggests a “constraint” on Japanese passives to the following effect: if the passive subject is inanimate, then the old active subject bearing a “human” role cannot be marked by *-ni*. As he notes, this seems to be a valid generalization both for Classical and Modern Japanese. For some related discussion, see Kinsui (1993) and the references cited therein.



use of the name of any inanimate thing as the subject of an active verb”, which may be illustrated by the following examples ((42a) is Chamberlain’s and (42b) supplied by the present author).

(42) a. *The rain delayed me.*

b. \**Ame ga watasi o okure-sase-ta.*  
     rain NOM I ACC be late-CAUS-PST

As Chamberlain says, (42a) appears “to attribute an action to” something inanimate, which is generally impossible in Japanese. Other examples he cites include *The heat makes me feel languid* and *His diligence surprises me*, neither of which would be acceptable if directly translated into Japanese. Linguistic facts like these are well-known now, but it seems that they were rediscovered by later scholars, Chamberlain’s work having rarely been cited in this context (see for example Sakuma 1941 and later work). Chamberlain’s generalization, as I therefore call it, on the difference between Japanese and European languages regarding the permissibility of inanimate subjects with causative verbs obviously needs explanation and, in fact, much work has been done in this area, especially from the perspective of the linguistic typology, rather popular in Japan, that tries to divide languages into *suru-teki gengo* ‘DO-type language’ such as English and *naru-teki gengo* ‘BECOME-type language’ such as Japanese. The basic idea here comes from the observation that English and Japanese tend to describe the same event in characteristically different ways. For example, where an English speaker asks *What do you hear?*, a Japanese speaker asks *Nani ga kikoemasu ka?* ‘What is audible to you?’, and scholars have been trying to construct an adequate theory of DO-type and BECOME-type languages such that the kind of differences between English and Japanese just mentioned as well as that observed in (42) somehow follow from it (for various observations and suggestions, see the references cited above and Ikegami 1981, Kageyama 1996, and Nishimura 1998 *inter alia*).

I mentioned Chamberlain’s generalization above not simply to introduce the DO/BECOME typology, which is interesting enough in itself and which shows that the so-called “voice-related phenomena” have naturally been extended in Japanese contrastive linguistics even to cover cases like (42); I mentioned it also because it may be relevant to our earlier observation concerning (40) that purely Japanese passives tend to avoid inanimate subjects. Namely, is it possible or probable that the unacceptability of the PASSIVE in (40b), repeated here as (43a), and the unacceptability of the CAUSATIVE in (42b), repeated here as (43b), will be shown to constitute the same phenomenon, that they will be explained by one and the same principle?

- (43) a. \**Sono hasi wa watasi no yuuzin ni tukur-are-ta.*  
           the bridge TOP I GEN friend BY build-PASS-PST  
           ‘The bridge was built by my friend.’
- b. \**Ame ga watasi o okure-sase-ta.*  
           rain NOM I ACC be late-CAUS-PST  
           ‘The rain delayed me.’

I am not sure if the above question has been asked before, but it is a natural question to ask because the possibility or impossibility of (43a) and (43b) seem to correlate systematically, distinguishing languages of the Japanese type from languages of the English type. It is also an interesting question, potentially relevant to some important issues discussed in this chapter, such as the choice between the uniform theory and the non-uniform theory of Japanese passives and the relation between passives and causatives in the system of voice in Japanese. Meanwhile, the possibility that Chamberlain’s generalization, Yamada’s finding, and Matsushita’s analysis may converge upon a single point this way seems to tell us again that we still have a lot to learn from the work of early grammarians.<sup>10</sup>

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<sup>10</sup> In section 3.5 of the present chapter, I introduced the “GET theory” of Japanese passives as it is revived and defended in Washio (2005), which says that the Japanese passive morpheme *-(r)are-* developed from the lexical verb *e-* ‘to get’. A referee informed me of a paper by Frellesvig and Whitman (2016) as “remotely relevant” to the present discussion: “it is argued [in their paper] that the suffix *-e-* that appears as a transitivity marker and an intransitivity marker in verb alternations originates from the verb ‘get’ (a follow-up on Yoshida Kanehiko’s [1973] assumption).” This seems to be an extremely promising analysis though the idea itself is very old in the history of Japanese linguistics. It is a lot older than Yoshida (1973) in fact, going back to Hoffmann (1876) as far as I know. Notice that if my analysis of the origin of the passive morpheme *-(r)are-* and Frellesvig and Whitman’s analysis of the origin of the transitivity/intransitivity marker *-e-* are both correct, then the lexical verb *e-* ‘to get’ has played a crucial role in the history of Japanese, contributing to the rise of the two important voice-related morphemes.

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## 4 Causative constructions in Japanese and Korean

### 1 Introduction

This chapter examines central issues in the analysis of causative constructions in Japanese and Korean, providing an overview of research covering both the vigorous exchanges of ideas and the controversies of the 1970s through 1990s as well as issues of high relevance today not only to Japanese and Korean but also to other languages as well. Our discussions take the following progression.

In section 2, after a brief discussion on the differences between the traditional approach to causatives and those of modern theories, we examine the characteristics of Japanese and Korean, particularly at the morphological level, from the standpoint of productivity and constraints on the formation of causatives. The relationship between productive forms involving the suffix *-(s)ase* (“*sase* forms” hereafter) and existing transitive verbs has been one of the contentious issues on the Japanese side. Section 3 reviews this topic by examining the debate between Miyagawa (1984, 1989) and Kuroda (1990, 1993). On the Korean side, attention has been drawn to meaning similarities and differences between the lexically restricted *-i/-hi/-li/-ki* causatives and the productive *-key ha-ta* [COMP do-IND] periphrastic construction due to a large degree of overlap in the distribution of the two. In preparation for assessing the controversy between Yang (1972, 1974, 1976) and Shibatani (1973c, 1975, 1976b) over the meaning differences between lexical causatives and their productive counterparts in Korean, section 4 clarifies terminological problems and offers more rigorous definitions of direct and indirect causation. Section 5 shows how the Yang-Shibatani controversy can be resolved in favor of Shibatani by recognizing “sociative causation”, which lies between the two poles of direct and indirect causation. A major difference between Japanese and Korean causatives is that Korean lexical causatives marked by *-i/-hi/-li/-ki* cover not only the direct but also the sociative domain while Japanese lexical causatives are basically confined to the direct causative domain. It is this characteristic that has led many Korean researchers to the view that Korean lexical causatives convey indirect causation in a manner similar to productive *-key ha-ta* constructions.

We move on to discuss ramifications of recognizing the sociative type in the remainder of this chapter, first examining how it correlates with aspect, especially the progressive aspect (section 6) and with case marking of the causee nominal (section 7). The following two sections examine the pattern of adverbial modification (section 8) and the issues pertaining to the construal of reflexive forms (section 9).

One of the major achievements of generative transformational analyses of causative constructions has been the revelation that even when surface structures differ between two languages, they may still display parallel phenomena. Such facts motivated positing embedding biclausal deep structures not only for periphrastic causatives, where the causative verb and the verb representing a caused event appear separately, as in the Korean *-key ha-ta* construction, but also for morphological causatives of the Japanese *sase* type, whose surface structures are similar to monoclausal lexical causatives. The phenomena that played a key role in motivating and advancing the biclausal analysis of productive morphological causatives have been adverbial modification and the interpretation of reflexives. Phenomena like these continue to be invoked widely today in the descriptions and analyses of causative constructions in a variety of languages that maintain the biclausal analysis for productive causatives conveying indirect causation. Our discussions in sections 8 and 9 demonstrate that both adverbial modification and reflexive phenomena are controlled by factors independent from the direct/indirect opposition or from the distinction in the lexical/productive formation patterns, rendering the evidence for the biclausal analysis far less convincing than has been hitherto thought.

## 2 Causation and causative forms: Productivity and constraints

In this section, we will consider causation and causative forms from the standpoint of productivity and constraints and put into high relief differences in the characteristics of causatives in Japanese and Korean.

In the grammatical tradition in Japan (as elsewhere), definitions of causative constructions refer to both semantic and morphological characteristics, such as that they denote situations involving the act of influencing/causing someone else to carry out some action, and that they are formally characterized by the presence of suffixes *-(s)as* or *-(a)sim* in the classical language and *-(s)ase* or the formal *-(a)sime* in the modern language (1a). Definitions like this normally cover only prototypical patterns. As in (1b) and (1c), the causee nominal is not actually limited to animate beings. Also, a *sase* form can be used even when the base verb denotes a change of state rather than an action, as in (1c).

- (1) a. *Titioya ga musuko ni sake no tukai ni ik-ase-ta.*  
 father NOM son DAT liquor of errand to go-CAUS-PST  
 'Father made his son go on an errand for buying liquor.'
- b. *Baiuzensen ga ame o hur-ase-ru.*  
 seasonal.rain.front NOM rain ACC fall-CAUSE-PRS  
 'A seasonal rain front brings rain.'



- c. *Reizooko ni ire-te zerii o katamar-ase-ta.*  
 refrigerator to put in-and jelly ACC harden-CAUS-PST  
 ‘(I) put jelly in the refrigerator in order to harden it.’

In terms of the morphology, we find not only *sase* forms but also transitive verbs without overt causative morphology used to describe a situation where someone causes someone else to carry out some action. For example, (2b) can be used in nearly the same situation as that depicted by (2a). (See Shibatani 1976b: 36 concerning interpretation (ii) of 2b.)

- (2) a. *Hahaoya wa kodomo o nikai e agar-ase-ta.*  
 mother TOP child ACC upstairs to go up-CAUS-PST  
 ‘The mother made the child go upstairs.’
- b. *Hahaoya wa kodomo o nikai e age-ta.*  
 mother TOP child ACC upstairs to raise-PST  
 (i) ‘The mother took the child upstairs.’  
 (ii) ‘The mother sent the child upstairs.’

In his works on causatives in the 1970s, Shibatani examined these two contrasting causative forms and termed the regular, lexically unrestricted *sase* form the productive causative, and transitive verbs, such as *koros-u* ‘to kill’, *ake-ru*<sup>1</sup> ‘to open (tr)’, whose forms are unpredictable from the semantically corresponding intransitive verbs but whose meanings are causative, he termed lexical causatives, with the recognition that the notion of causation is semantic and is independent of a formal expression. Reaching beyond the boundaries of the traditional definition, which excluded lexical causatives, some transitive verbs thus came to be included in the category of causatives, a position that also garnered both empirical and theoretical support. Empirically, languages vary in causative marking to a greater or lesser extent. While both Japanese and English express verbs of killing lexically, languages like Turkish and Quechua use a productive causative suffix (e.g. Turkish *öl-dür* [die-CAUS] ‘kill’; Quechua *wañu-či* [die-CAUS] ‘kill’), just like other causative forms (Turkish *gül-dür* [laugh-CAUS] ‘make laugh’; Quechua *apa-či* [carry-CAUS] ‘make carry (the rock)’), which would be marked by the productive suffix *-(s)ase* in Japanese.

Semantically both transitive verbs like *koros-u* ‘kill’ and *ire-ru* ‘put in (tr.)’ and morphological causatives such as *sin-ase-ru* ‘cause to die’ and *hair-ase-ru* ‘cause to be in’ involve similar entailments. To capture this, generative semanticists in the late 1960s decomposed a transitive verb like *kill* into the semantic elements CAUSE, BECOME, NOT ALIVE, explicitly including the semantic element CAUSE (McCawley 1968, Lakoff 1970). This kind of analysis including an implicit causative element

<sup>1</sup> The Japanese *-u/-ru* endings mark the present-tense indicative mood.

**Table 1:** Transitive verbs and causatives in Japanese and the distribution of *-i/-hi/-li/-ki* in Korean

Lexical causatives in J (Transitive verbs)	Productive causatives in J	
	Intransitive-based	Transitive-based
<i>war-u</i> 'break'	<i>sin-ase-ru</i> 'cause to die'	<i>mi-sase-ru</i> 'cause to see'
<i>mawa-s-u</i> 'turn'	<i>ne-sase-ru</i> 'cause to sleep'	<i>tabe-sase-ru</i> 'cause to eat'
<i>wak-as-u</i> 'boil'	<i>nak-ase-ru</i> 'cause to cry'	<i>hak-ase-ru</i> 'cause to put on'
<i>her-as-u</i> 'reduce'	<i>waraw-ase-ru</i> 'cause to laugh'	<i>araw-ase-ru</i> 'cause to wash'
<i>kusar-as-u</i> 'rot'	<i>suwar-ase-ru</i> 'cause to sit'	<i>yom-ase-ru</i> 'cause to read'
<i>ag-e-ru</i> 'raise'	<i>aruk-ase-ru</i> 'cause to walk'	<i>kam-ase-ru</i> 'cause to chew'
Lexical causatives in K		
<i>kkay-ta</i> 'break'	<i>cwuk-i-ta</i> 'cause to die'	<i>po-i-ta</i> 'cause to see'
<i>tol-li-ta</i> 'turn'	<i>ca-ywu-ta</i> 'cause to sleep'	<i>mek-i-ta</i> 'cause to eat'
<i>kkulh-i-ta</i> 'boil'	<i>wul-li-ta</i> 'cause to cry'	<i>sin-ki-ta</i> 'cause to put on'
<i>cwul-i-ta</i> 'reduce'	<i>wus-ki-ta</i> 'cause to laugh'	<i>ssis-ki-ta</i> 'cause to wash'
<i>ssek-hi-ta</i> 'rot'	<i>anc-hi-ta</i> 'cause to sit'	<i>lk-hi-ta</i> 'cause to read'
<i>ol-li-ta</i> 'raise'	<i>kel-li-ta</i> 'cause to walk'	<i>ssip-hi-ta</i> 'cause to chew'

was also widely applied to change of state verbs, giving support to treating many transitive verbs as causatives, as in the works dealing with a transitive-intransitive alternation such as Levin and Rappaport Hovav (1995) and Kageyama (1996).

Turning to the morphological causative marking in Japanese and Korean, we recognize that the distribution of the causative suffixes *-i/-hi/-li/-ki* in Korean covers both lexical and productive morphological domains in Japanese, as seen in Table 1. That is, on the one hand, the Korean causative suffixes are as unproductive as the Japanese transitive suffixes *-as*, *-os*, *-s*, *-e* in that the choice of the suffixes is not predictable (cf. *mek-i-ta*/\**mek-hi-ta* 'cause to eat' and *ilk-hi-ta*/\**ilk-i-ta* 'cause to read') and in that many verbs do not causativize via *-i/-hi/-li/-ki* suffixation (see Table 2). These properties render Korean morphological causatives lexical causatives. On the other hand, the *-i/-hi/-li/-ki* suffixation is much more productive than the Japanese counterparts in that they even attach to some transitive verbs, which must use the productive causative *sase* forms in Japanese. Moreover, as shown in Table 2, the distribution of Korean lexical causatives can overlap that of the productive periphrastic form *-key ha-ta*.<sup>2</sup> Even so, the Korean morphological causatives are restricted in the verbs they can and cannot affix to, and so lexical constraints must be recognized for them such that in some cases only the productive periphrastic form is possible. Although the generalizations do not apply to all cases, verbs with the following

<sup>2</sup> The *-key hata* form has also been called the "analytic" or "euphemistic/indirect" causative (Comrie 1989, and others), the PURP ("purpose") type (Song 1996), and, in Korean studies, "long-form causatives". The last stands in opposition to the *-i/-hi/-li/-ki* forms as "short-form causatives".

**Table 2:** Productive *-key ha-ta* forms and restrictions on the *-i/-hi/-li/-ki* forms in Korean

Base verb	Lexical causative	Productive causative	
<i>tol-ta</i> 'turn'	<i>tol-li-ta</i>	<i>tol-key ha-ta</i>	'cause to turn'
<i>cwk-ta</i> 'die'	<i>cwuk-i-ta</i>	<i>cwuk-key ha-ta</i>	'cause to die'
<i>wus-ta</i> 'laugh/smile'	<i>wus-ki-ta</i>	<i>wus-key ha-ta</i>	'cause to laugh/smile'
<i>wul-ta</i> 'cry'	<i>wul-li-ta</i>	<i>wul-key ha-ta</i>	'cause to cry'
<i>mek-ta</i> 'eat'	<i>mek-i-ta</i>	<i>mek-key ha-ta</i>	'cause to eat'
<i>ssis-ta</i> 'wash'	<i>ssis-ki-ta</i>	<i>ssis-key ha-ta</i>	'cause to wash'
<i>ip-ta</i> 'put on'	<i>ip-hi-ta</i>	<i>ip-key ha-ta</i>	'cause to put on'
<i>ssip-ta</i> 'chew'	<i>ssip-hi-ta</i>	<i>ssip-key-ha-ta</i>	'cause to chew'
<i>ka-ta</i> 'go'	* <i>ka-i-ta</i>	<i>ka-key ha-ta</i>	'cause to go'
<i>o-ta</i> 'come'	* <i>o-i-ta</i>	<i>o-key ha-ta</i>	'cause to come'
<i>talli-ta</i> 'run'	* <i>talli-i-ta</i>	<i>talli-key ha-ta</i>	'cause to run'
<i>ttwy-ta</i> 'jump'	* <i>ttwy-i-ta</i>	<i>ttwy-key ha-ta</i>	'cause to jump'
<i>cha-ta</i> 'kick'	* <i>cha-i-ta</i>	<i>cha-key ha-ta</i>	'cause to kick'
<i>kkay-ta</i> (Tr) 'break'	* <i>kkay-i-ta</i>	<i>kkay-key ha-ta</i>	'cause to break'
<i>yel-ta</i> (Tr) 'open'	* <i>yel-li-ta</i>	<i>yel-key ha-ta</i>	'cause to open'
<i>mantul-ta</i> 'make'	* <i>mantul-li-ta</i>	<i>mantul-key ha-ta</i>	'cause to make'
<i>kuli-ta</i> 'draw'	* <i>kuli-i-ta</i>	<i>kuli-key ha-ta</i>	'cause to draw'
<i>tuli-ta</i> 'give' (HON)	* <i>tuli-i-ta</i>	<i>tuli-key ha-ta</i>	'cause to give'
<i>cwu-ta</i> 'give'	* <i>cwu-i-ta</i>	<i>cwu-key ha-ta</i>	'cause to give'

(NB: The asterisked forms in the above table are all grammatical in Japanese *sase* forms, showing that they align with Korean *-key ha-ta* forms in terms of productivity, and in function as seen below.)

characteristics are generally incompatible with the causative suffixes: verb stems ending in *-i*, verbs denoting striking or touching actions, transitive change of state verbs, and verbs of creation and giving.

While both Japanese and Korean allow overlaps between lexical causatives and productive counterparts, the degree of overlap is quite different between the two languages. Korean allows a far greater degree of overlap between lexical *-i/-hi/-li/-ki* causatives and the productive *-key ha-ta* periphrasis than is found between lexical causatives and the productive *sase* forms in Japanese. Especially noteworthy is the fact that the Korean suffixes attach to many verb stems that denote activities involving an agent, resulting in causative forms with two agentive participants (e.g. *kel-li-ta* 'make walk', *ilk-hi-ta* 'make read'), which, at first sight, appear indistinguishable in meaning from the corresponding productive *-key ha-ta* forms, which typically involve an agentive causee (e.g. *ket-key ha-ta* 'make walk', *ilk-key ha-ta* 'make read'). Because of this fact, interest has been drawn to the question of the meanings borne by the two forms, and a controversy arose between Yang (1974, 1976), who maintained that a lexical causative like *kel-li-ta* 'make walk' and the productive counterpart *ket-key ha-ta* 'make walk' are synonymous, and Shibatani (1973c, 1975), who countered that

lexical causatives and their productive counterparts are not entirely synonymous. We will take up this controversy in a subsequent section where we see a resolution favoring Shibatani's non-synonymy hypothesis.

Besides the controversy over the meaning difference between lexical causatives and their productive counterparts, Japanese and Korean causatives raise an issue concerning the form-based typological parameter proposed by Dixon (2000) and others (e.g. Haiman 1985). Dixon proposes the following formal parameter that represents the compactness of causative forms: Lexical > Morphological > Complex predicate > Periphrastic, where > indicates that the form on the left of the arrowhead is more compact than the one on the right. He then draws the following generalization over the form-meaning correlation: "the direct value of the [semantic] parameter [of the directness in causation] is always marked by the more compact mechanism, and the indirect value by the less compact one" (Dixon 2000: 77).

As the Japanese forms in Table 1 show, many irregular, lexical (e.g. *wak-as-u* 'boil', *ag-e-ru* 'raise') and regular, productive causative (e.g. *aruk-ase-ru* 'make walk', *ki-sase-ru* 'make wear') types involve morphology such that Dixon's formal parameter would lump the two together, while they are functionally different. Also, the compactness parameter would distinguish the productive *sase* morphological forms in Japanese and the Korean *-key ha-ta* periphrastic constructions, despite the fact that they are functionally alike in denoting indirect causation. What distinguishes between irregularly suffixed morphological causatives and *sase* forms in Japanese is the productivity of the forms, and what makes Japanese *sase* morphological causatives and Korean *-key ha-ta* periphrastic causatives cohere in meaning and function is again the productivity of the relevant forms. The functional parameter of productivity cuts across Dixon's formal parameter and makes a better prediction of form-meaning correlations; namely, unproductive forms (lexical causatives) cover the range of causative meanings toward the direct causative pole, while productive forms tend toward the indirect pole (see below)<sup>3</sup>.

### 3 Miyagawa's blocking account

In the study of Japanese causatives, attention has been drawn to both the formation of *sase* causatives and their function vis-à-vis transitive verbs (Teramura 1982: 293–296). The formation and acceptability of *sase* forms was the focus of debates within

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<sup>3</sup> There is a general tendency for forms conveying direct causation to be shorter or more compact than those conveying indirect causation, which seems to reflect one of Zipf's laws formulated as "the length of a word tends to bear an inverse relationship to its relative frequency" (Zipf 1935: 38).

the generative grammar framework between the syntactician Kuroda (1990, 1993) and the then-lexicalist Miyagawa (1984, 1989). According to Miyagawa, the acceptability of *sase* forms and their meanings can be explained by a blocking mechanism in the lexicon. The blocking mechanism, according to Miyagawa, works in two ways, one where the *sase* form itself is blocked from occurring at all due to the existing lexical causative/transitive verb (*\*wak-ase-ru/wakas-u* ‘boil (tr)’), and one where a *sase* form is permitted because of the possibility of involving an agentive causee and thus conveying indirect causation, unlike the blocking lexical causative conveying direct causation (*oti-sase-ru* ‘make drop’/*otos-u* ‘drop (tr)’). When there are no competing lexical causatives, *sase* forms are permitted with a wider range of meaning covering both direct and indirect causation (*suwar-ase-ru* ‘make sit down’). Kuroda (1993: 40) reproduces the *sase* formation patterns that Miyagawa’s blocking analysis predicts as follows:

**Table 3:** Miyagawa’s blocking analysis

	Intransitive	transitive	(s) <i>ase</i> -causative
I.	<i>sak-</i> ‘bloom’ <i>kusar-u</i> ‘rot’ <i>nio(w)-u</i> ‘sema11’	<i>sak-ase-ru</i> <i>kusar-ase-ru</i> <i>niow-ase-ru</i>	
II.	<i>wak-u</i> ‘boil’ <i>kawak-u</i> ‘dry’ <i>ware-ru</i> ‘break’	<i>wak-as-u</i> <i>kawak-as-u</i> <i>war-u</i>	<i>*wak-ase-ru</i> <i>*kawak-ase-ru</i> <i>*ware-sase-ru</i>
III.	<i>taore-ru</i> ‘fall down’ <i>ot-i-ru</i> ‘drop’ <i>sizum-u</i> ‘sink’	<i>taos-u</i> <i>ot-os-u</i> <i>sizum-e-ru</i>	<i>taore-sase-ru</i> <i>oti-sase-ru</i> <i>sizum-ase-ru</i>

(The asterisks are due to Miyagawa, who believes that Japanese does not allow these forms to occur.)

Both Kuroda (1993: 42–46) and Chung (2006: Chapter 5) question the validity of Miyagawa’s blocking analysis. Kuroda, while acknowledging the need to conjure up appropriate contexts for the relevant *sase* forms to be able to occur, maintains that causatives of Type II “are in principle grammatical” and that those of Type III permit non-agentive causee readings, contrary to Miyagawa’s claims about them. While Kuroda’s counterexamples are permissive *sase* forms, it is actually not that difficult to come up *sase* forms with the regular, inducing causative readings that go against Miyagawa’s claims. Observe the following:

- (3) a. *Reizooko ni ire-te zerii o {katame/ katamar-ase}-ta.*  
 refrigerator to put in-and jelly ACC {harden/harden-CAUS}-PST  
 ‘(I) put jelly in the refrigerator in order to harden it.’

- b. *Kazaguruma o {mawasi/ mawar-ase}-ta.*  
 pinwheel ACC {turn/ turn-CAUS}-PST  
 ‘(I) turned a pinwheel/ (I) made a pinwheel turn.’
- c. *Santoyo de wa yu wa nakanaka wak-anai*  
 mountain.summit at TOP hot.water TOP easily boil-NEG  
*keredo, zikan o kakete konro no ue ni oite okeba,*  
 though, time ACC spend stove GEN top on place.COND  
*yu o bukubuku wak-ase-ru koto ga dekiru.*  
 hot.water ACC bubbling boil-CAUS-PRS that NOM can  
 ‘On a mountain summit, water does not easily boil, but if you place  
 (the kettle) on the stove for an extended time, (you) can make water boil  
 with bubbles.’
- d. *Tuyu-doki no sentaku-mono o situnaide hayaku*  
 rainy-season GEN laundry-stuff ACC in.the room quickly  
*kawak-ase-yoo to omoeba, tuuhuu o yoku sinasai.*  
 dry-CAUS-INT that think.if ventilation ACC well do.IMP  
 ‘If you want to make the laundry dry quickly in the room during the rainy  
 season, make the ventilation good.’
- e. *Donguri o kona ni suru toki wa, hi ni atete*  
 acorn ACC powder DAT make time TOP sun DAT expose  
*ware-sase-ru to muku tema ga habukeru soo desu.*  
 split-CAUS-PRS if peel bother NOM can.avoid hearsay COP  
 (manekineko44.blogspot.com/2012/01/blog-post\_23.htm)  
 ‘When making flour from acorns, they say that you can avoid the bother  
 of peeling them if you put them out in the sun and cause them to split.’

As for (3a,b), notice that if the direct objects were not ‘jelly’ and ‘pinwheels’ but were *nendo* ‘clay’ or *kairanban* ‘circular passed around the neighborhood’ instead, the *sase* form would be less acceptable, whereas there is no such restriction on the transitive verb forms. This shows that it is not just the meaning of the verb that determines the acceptability of the *sase* forms but that the semantic features of the causee phrase also need to be considered (see Chung 2006 for details). In the case of the transitive verb, the situation is conceived as that of direct causation whereby a change is effected in the object through some physical action on the part of the causer without regard to the nature of the object. The *sase* form, on the other hand, construes the situation as involving indirect causation, whereby the causer creates a situation that induces a change through the exercise of some inherent potentiality of

the caused object<sup>4</sup> (see next section for detailed discussion on the difference between direct and indirect causation). Thus, *sase* is archetypically used with action verbs (1a), is next applied to verbs expressing natural phenomena that have an inherent potentiality in which the event in question can arise on its own (1b), and is then extended to change events in which the entity undergoing the change can be expected to have a similar potential property (1c). Examples (3c, d, e) are constructed to show that even those objects that are less susceptible to an autonomous change can be made possible causees when the context strongly implicates the sense of indirect causation.

The kind of semantic difference seen between lexical causatives (transitive verbs) and the competing *sase* causatives is paralleled in Korean as well. For example, between the lexical causative and the periphrastic counterpart below, the former imparts a sense of the action of kicking the chair and it falling over being more-or-less simultaneous, whereas with the productive *-key ha-ta* form the two events are perceived as being connected more indirectly. Even should the situation be construed in a manner similar to that of the transitive verb, it becomes a slow-motion description highlighting the cause-effect relation between the two events.

- (4) a. *pal-lo cha-se, uyca lul twuylo nemettu-li-ess-ta.*  
 foot-with kick-CONJCT chair ACC back.to fall-CAUS-PST-IND  
 ‘Kicking it with a foot, (he) toppled the chair.’
- b. *pal-lo cha-se, uyca lul twuylo nemeci-key ha-yess-ta*  
 foot-with kick-CONJCT chair ACC back.to fall-COMP do-PST-IND  
 ‘Kicking it with a foot, (he) made the chair fall back down.’

The fact that even the periphrastic *-key ha-ta* construction requires a more elaborate context for it to occur in describing a situation involving a causee without an inherent potential for undergoing change of state, just as in the English examples in (6) below, indicates that the difficulty that Miyagawa found with forms like *wak-ase-ru* ‘make boil’ and *kawak-ase-ru* ‘make dry’ has really nothing to do with the organization of the lexicon as he saw it. Observe:

- (5) a. *ppallay lul te ppalli malu-key ha-lyemyen*  
 laundry ACC more quickly dry COMP do as.that do.if  
*kencotay mith ey sinmwunci lul phye-twu-myen coh-ta.*  
 drying.rack below LOC newsprint ACC spread.place-if good  
 (news.chosun.com/site/data/html\_dir/2016/.../2016061300134.html)  
 ‘If you want to make the laundry dry more quickly, you should spread  
 newsprint under the drying rack.’

4 Cf. Shibatani’s (1976b: 256) remarks about the nature of the inanimate causee nominal of *sase* causatives in the context of permissive causation: “... in the permissive causative situation expressed by the *o*-causative form and involving nonvolitional entity as the causee, the process must be such that it must have either inherent or programed potentiality to take place.”

- b. *aplyek papsoth ul sayongha-myen mwul ul te ppalli*  
 pressure cooker ACC use.do-if water ACC more quickly  
*kkulh-key ha-l swu iss-ta.*  
 boil-COMP do-FUT can  
 'If you use a pressure cooker, you can make water boil more quickly.'

- (6) a. *Cannons were bored under water and the boring process **made the water boil**. Rumford observed that the water boiled for only as long as the boring process ...*  
 (<https://books.google.co.jp/books?isbn=0198755813>)
- b. *I also successfully used it [a dehumidifier] when drying laundry, placing it next to the drying rack which **made the clothes dry** a lot faster...*  
 (<https://www.amazon.co.uk/Homefront-HFDH600-Peltier-Compact.../B006ZL1WZK>)

## 4 Direct and indirect causation

While many semantic parameters for causatives may be posited for typological purposes, as Dixon (2000) does, the single most important parameter relevant to the form-meaning correlation in causatives across languages is the directness parameter. Some other parameters posited by Dixon are integral to this one, as we will see in the next section. Shibatani's (1973a, b, c, 1975, 1976a, b) works dealing with Japanese and Korean were meant to demonstrate the importance of this parameter in crosslinguistic research on causatives. In his earlier works, however, Shibatani avoided popular terms such as "direct" vs. "indirect" causation and "contact" vs. "distant" causation because these terms had been used rather loosely and ambiguously by other linguists.<sup>5</sup>

Shibatani (1973b) instead distinguished the two principal types of causative situation using the terms "manipulative" and "directive". Manipulative causation involves an agentive causer and a patient causee; the causer typically brings about the caused event by physically manipulating the causee. Directive causation, on the other hand, involves two agents, both causer and causee being agentive. Here, the causer typically gives an oral instruction to the causee, who acts accordingly. In view of the continued popularity of the terms "direct" and "indirect" causation, we may opt for them after first unambiguously defining them. The term "direct causation" can be used in reference to a situation where an agentive causer and a patient

<sup>5</sup> Dixon (2000: 67), for example, defines the parameter of "directness" in terms of "whether the causer acts directly or indirectly", while what we really want to know is what acting directly or indirectly means.



causee are involved, and where the causing event segment and the caused event segment show spatio-temporal overlap. “Indirect causation” then refers to a situation involving an agentive causer and an agentive causee, where the causing event segment and the caused event segment do not overlap as in direct causation. If we define **prototypical** direct and indirect causation in this way, then they cover the situations meant to be covered by the terms “manipulative” and “directive” causation and the other popular terms “contact” and “distant” causation. Physical manipulation, hence contact between the causer and the causee undergoing a change of state, is typically called for in realizing a caused event if the causee is merely a patient. On the other hand, simple direction-giving suffices when an agentive causee is involved. When there are two agents acting on their own accord involved, there can be a time lag and a possible difference in location between the causing event segment (direction-giving) and the caused event segment. The notion of “distant” causation is rooted in the involvement of two independent agents whose activities in a causal relationship need not overlap spatio-temporally. Less prototypical indirect causation involving an agentive causer and a patient causee obtains when there is a temporal or locational displacement of the caused event segment vis-à-vis the causing event segment (see the diagrammatic representations of these relations in the next section and section 9).

Shibatani’s (1973b) claim was that in both Japanese and Korean, lexical causatives convey direct (i.e. manipulative) causation, whereas the productive *sase*-forms in Japanese and the periphrastic *-key ha-ta* forms in Korean express indirect (i.e. directive) causation. This generalization holds true to a large extent, as indicated by the following contrastive pairs of examples and their English translations:

- (7) a. *Hahaoya ga kodomo ni huku o kise-ta.*  
 mother NOM child DAT clothes ACC put on-PST  
 ‘Mother put the clothes on the child.’
- b. *Hahaoya ga kodomo ni huku o ki-sase-ta.*  
 mother NOM child DAT clothes ACC wear-CAUS-PST  
 ‘Mother made the child wear the clothes.’
- (8) a. *Emeni ka ai eykey os ul ip-hi-ess-ta.*  
 Mother NOM child DAT clothes ACC wear-CAUS-PST-IND  
 ‘Mother put the clothes on the child.’
- b. *Emeni ka ai eykey os ul ip-key ha-yess-ta.*  
 mother NOM child DAT clothes ACC wear-COMP do-PAST-IND  
 ‘Mother made the child wear the clothes.’

Evidence of this kind was the basis for Shibatani’s (1973c) argument against Yang’s (1972) claim that Korean lexical causatives and periphrastic causatives are synonymous and that both forms are accordingly to be derived from the same embedding

underlying structure. Although presumably no one seriously accepts Yang's synonymy hypothesis anymore (see Song's (1988) summary of various opinions on this issue), Shibatani's original framework based on the manipulative-directive (or the direct-indirect) contrast fails to capture the nature of the following kind of Korean expressions, where lexical causatives convey situations clearly involving two agents.

- (9) a. *Emeni ka ai lul kel-li-ess-ta.*  
 mother NOM child ACC walk-CAUS-PST-IND  
 'Mother made the child walk.'
- b. *Emeni ka ai eykey chayk ul ilk-hi-ess-ta.*  
 mother NOM child DAT book ACC read-CAUS-PST-IND  
 'Mother made the child read the book.'

These examples show that the equation of "lexical causatives = direct (or manipulative) causation" may not always obtain.<sup>6</sup> It is on the basis of such examples that Yang (1974, 1976) and Song (1988) make the claim that Korean lexical causatives do convey indirect causation (and thus are synonymous to the periphrastic counterparts, according to Yang). In this chapter we will argue that these expressions are in fact not examples of true indirect causation, and that they represent another category of causative situation that is intermediate between direct and indirect causative situations.

## 5 Sociative causation

The examples given in (9) depict situations in which the causer agent participates in or attends to the activity of the causee agent in a more direct way than in indirect causative situations. The typical situation (9a) conveys is one where the mother takes the child's hand and walks with him, as indicated by the following example showing a typical context in which the form *kel-li-ta* 'make walk' is most appropriately used.

- (10) *Emeni ka khun ai lul kel-li-ko cakun ai nun*  
 mother NOM big child ACC walk-CAUS-CONJCT small child TOP  
*tung ey ep-ko cang ey ka-ss-ta.*  
 back LOC carry-CONJCT market LOC go-PST-IND  
 'Mother went to the market making the big child walk and carrying the younger child on her back.'

<sup>6</sup> See Shibatani (1973a, 1976b) for other cases in which this equation and the other equation of "productive causatives = indirect causation" breaks down.

By the same token, example (9b) is most appropriate when the mother sits next to the child and makes the child read under her supervision, as in the following example:

- (11) *Emeni ka ai eykey kulca lul hanahana ciphe-ka-mye*  
 mother NOM child DAT letter ACC one.by.one point-go-while  
*chayk ul ilk-hi-ess-ta.*  
 book ACC read-CAUS-PST-IND  
 ‘Mother made the child read the book by pointing to the letters one-by-one.’

These situations differ from typical indirect causative situations in that the causer actively participates in the execution of the caused events. The contrast being discussed here is more clearly seen in the following pair of lexical and periphrastic causative sentences.

- (12) a. *Sensayngnim i haksayngtul ul yek kkaci kel-li-ess-ta.*  
 teacher.HON NOM students ACC station to walk-CAUS-PST-IND  
 ‘The teacher walked (marched) the students to the station.’  
 b. *Sensayngnim i haksayngtul ul yek kkaci ket-key*  
 teacher.HON NOM students ACC station to walk-COMP  
*ha-yess-ta.*  
 do-PST-IND  
 ‘The teacher made the students walk to the station.’

The situation most aptly described by (12a) is the one where the teacher actually leads the students all the way to the station. Even if the teacher does not walk himself, he is still likely to be accompanying the students on a bicycle or in a car with a watchful eye on them. In the case of (12b), on the other hand, the teacher only needs to make sure that the students walk to the station; he may stay at school after giving instructions to the students.

Thus, although some Korean *-i/-hi/-li/-ki* forms do express situations involving an agentive causer and an agentive causee, they depict well-definable situations that are distinct from the typical indirect causative situation, in which the causing event and the caused event need not show spatio-temporal overlap. The causative situations under discussion are both similar to and distinct from direct and indirect causation. They are similar to indirect causation in that they involve two agents (an agentive causer and an agentive causee) but are distinct from it in that the causer actively participates in the execution of the caused event. They are similar to direct causation in that the causing event and the caused event show spatio-temporal overlap, but are distinct from it in involving two agents.

This intermediate causative situation was first recognized by Pardeshi (1999) and was christened “sociative causation” by Shibatani and Pardeshi (2002), where the three types of causative situation (direct, sociative, and indirect causation) were given theoretical status as the three focal points along the continuum of the directness dimension in the conceptual structure of causation. Their paper also demonstrated the importance of the category of sociative causatives in the pivotal role it plays in the development of polysemy between the causative and the applicative construction observed in a fair number of languages (e.g. Malay/Indonesian, Yidiny, Kinyarwanda, Hualapai).

In this section, we attempt to establish the significance of this intermediate causative type in the description of Japanese and Korean causatives. Particularly important is the bearing it has on the adverbial modification pattern and on the antecedent-reflexive construal pattern, phenomena that have played an important role in the description of causative constructions. Before going into detail, let us distinguish the three types of sociative causative below, which can be recognized in Korean as well.

- (13) *Hahaoya ga kodomo o asob-ase-te i-ru.* (Joint-action)  
 mother NOM child ACC play-CAUS-CONJCT be-PRS  
 ‘Mother is making the child play.’
- (14) *Hahaoya ga kodomo ni osikko o s-ase-te i-ru.* (Assistive)  
 mother NOM child DAT pee ACC do-CAUS-CONJCT be-PRS  
 ‘Mother is making the child pee.’
- (15) *Hahaoya ga kodomo ni hon o yom-ase-te i-ru.* (Supervision)  
 mother NOM child DAT book ACC read-CAUS-CONJCT be-PRS  
 ‘Mother is making the child read a book.’

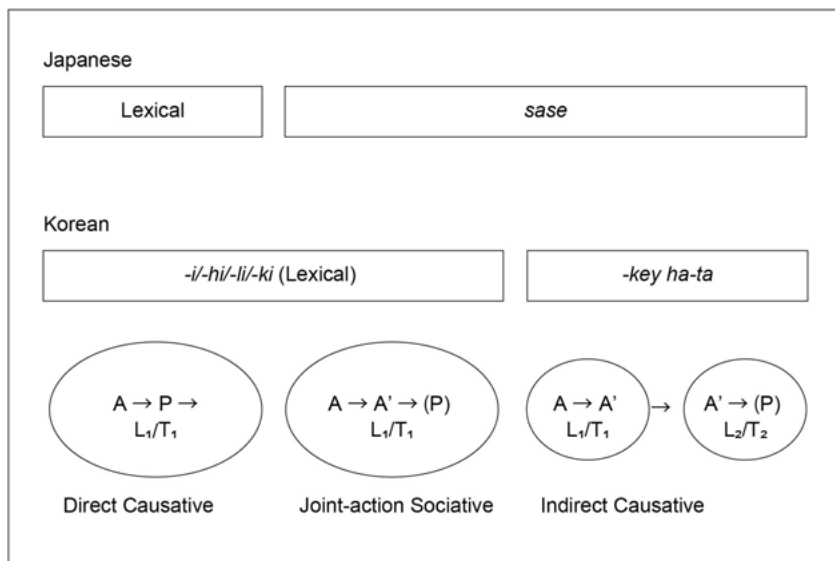
In (13), it is most likely that the mother is also playing with the child, though the supervision reading is also possible. (14) depicts a situation where the mother is helping the child to pee by pulling the child’s pants down or by holding the child, when the child is still small. (15) conveys a situation where the mother is supervising the child, who is reading. Although the mother is not as physically involved in the execution of the caused event as in the case of the joint-action and the assistive sociative, she is most likely physically close to the child reading a book. There is, however, some possibility that supervision is done from some distance. For example, in (15) the mother could be sitting at the door outside the room. Consider the following comparable Korean form:

- (16) *Emeni ka ai ekey nayng pang eyse chayk ul ilk-hi-ess-ta.*  
 mother NOM child DAT cold room in book ACC read-CAUS-PST-IND  
 ‘Mother made the child read a book in a cold room.’

This example is likely to be interpreted as depicting a situation where the mother sent the child to a cold room to read a book there as a punishment. The mother herself is not in the cold room, but in all likelihood she is keeping a watchful eye on the child and sees to it that the child remains in the cold room reading. This is a case of long-distance supervision and is distinct from a regular indirect causative situation conveyed by the *-key ha-ta* counterpart, which does not convey the sense of supervision. Thus, although the case of long-distance supervision allows a sociative causative to involve ostensible distant causation, the causer still attends to the execution of the caused event.

As the discussion above makes clear, sociative causatives themselves form a continuum along the directness dimension of the causative semantics. The joint-action sociative is closer to direct causation in that the causer is totally involved in the execution of the caused event. The assistive causative entails partial involvement of the causer in the achievement of the caused event. On the other hand, the supervision sociative is closer in meaning to indirect causation in that here the causer plays a more detached role in the execution of the caused event. Sociative causatives, thus, provide a gradual transition from direct causation to indirect causation. Notice that in Japanese it is the productive *sase* causatives that express sociative causation, whereas in Korean it is the *-i/-hi/-li/-ki* forms that are used in the expression of sociative causation. The discrepancy between Korean and Japanese can be more clearly seen in the following semantic map, which maps out the domains occupied by different types of causative of these two languages.

**Table 4:** Semantic map of Japanese and Korean causatives<sup>7</sup>



<sup>7</sup> Event structure diagrams in the table will be fully explained in section 9.

The distribution of causative forms on the semantic map is one major difference between Japanese and Korean. Though the reason for this difference is not entirely clear to us at the moment, we might offer two possible clues here. One is the fact that the Korean *-key ha-ta* expressions are not implicative (i.e. the caused events need not be entailed). That this construction has not firmly established itself as a true causative construction may have the effect of allowing a larger semantic space for the Korean *-i/-hi/-li/-ki* forms. The other is the possibility that the lexicalization of the *-i/-hi/-li/-ki* forms is more recent in history than the Japanese lexical causatives, thereby occupying an area closer to the side of indirect causation. It is generally believed that the *-i/-hi/-li/-ki* forms were more productive well into the Middle Korean period (15th century), as evidenced by forms such as *mwul-ul kil-i-ta* ‘make someone draw water,’ *sal-i-ta* ‘make someone live,’ *tung-ul kulk-hi-ta* ‘make someone scratch the back’ attested in Middle Korean. These are no longer usable in Modern Korean and their meanings must be expressed by the use of the *-key ha-ta* construction, which came to be used more widely after the 16th century.

## 6 Aspectual correlates

Though the productive *sase* forms are used in Japanese for both sociative and indirect causation, the sociative/indirect distinction manifests clearly when the *-te iru* progressive form is used. The forms in (13)–(15) are unambiguously interpreted as sociatives. The *ni*-causative in (17a) below is likely to be interpreted as a case of indirect causation (see next section on the relevance of case marking). Converting it to the progressive form results in an odd sentence if interpreted as a normal indirect causative sentence, as seen in (17b).

- (17) a. *Hahaoya wa kodomo ni kooen de asob-ase-ta.*  
 mother TOP child DAT park at play-CAUS-PST  
 ‘Mother had the child play in the park.’
- b. ??*Hahaoya wa kodomo ni kooen de asob-ase-te i-ru.*  
 mother TOP child DAT park at play-CAUS-CONJCT be-PRS  
 ‘Mother is having the child play in the park.’

It the case of sociative causation, it is possible and natural for a causer to be engaged for a prolonged time in the causing activity, e.g. undertaking the caused event jointly or supervising the causee. Notice here that the causee is simultaneously executing the caused event, and thus a causative situation obtains as the causer performs the causing activity. For example, in (13) when the mother is making the child play by playing with him or her, the causal relation is already in effect between the mother’s playing with the child and the child’s playing.

In the case of indirect causation, the caused event typically takes place after the causing event of direction-giving is completed. One can imagine a situation where a causer is giving a long set of directions to a causee to get something done. In such a case, the causer is in a prolonged state of executing the causing event and this state of affairs can conceivably be characterized by the progressive aspect. But it is not possible to construe such a situation as causative, because the caused event has not been realized at the time of direction giving. This prevents the causative progressive expression *-sase-te iru* from conveying indirect causation.

The only possible interpretation of the *-te i-ru* form as expressing indirect causation is a generic one, where the causation takes place as a routine over a certain period of time. Under this interpretation (17b) sounds natural, especially together with an adverb like *saikin* ‘recently’ in sentence initial position. In other words, while the *-te i-ru* form allows both progressive and generic interpretations when sociative causation is involved, it allows only the generic reading when indirect causation is expressed.

A similar pattern appears to obtain in Korean, as indicated by the following contrast:

- (18) a. *Emeni ka ai lul/ekey chayk ul ilk-hi-ko iss-ta.*  
 mother NOM child ACC/DAT book ACC read-CAUS-CONJCT be-IND  
 ‘Mother is making the child read the book.’
- b. ??*Emeni ka ai lul/ekey chayk ul ilk-key*  
 mother NOM child ACC/DAT book ACC read-COMP  
*ha-ko iss-ta.*  
 do-CONJCT be-IND  
 ‘Mother is having the child read the book.’

## 7 Case marking of the causee nominal

Traditionally differential case marking of the causee nominal in terms of the dative and the accusative case was analyzed in relation to the nature of the causee. According to Kuroda (1965) and Shibatani (1973a), if the causee is willing to execute the caused event, the dative case marks the causee, whereas if the causee is resistant and if the causer has to resort to coercion in bringing the caused event about, then the accusative case marks the causee nominal. Yet, it is clear from the following pairs of sentences that the *o/ni* distinction in Japanese correlates significantly with the sociative/indirect distinction.

- (19) a. *Hahaoya wa kodomo o kooen de asob-ase-ta.* (Sociative)  
 mother TOP child ACC park in play-CAUS-PST  
 ‘Mother made the child play in the park.’
- b. *Hahaoya wa kodomo ni kooen de asob-ase-ta.* (Indirect)  
 mother TOP child DAT park in play-CAUS-PST  
 ‘Mother had the child play in the park.’
- (20) *Hahaoya wa kodomo o kooen de aruk-ase-ta.* (Sociative)  
 mother TOP child ACC park in walk-CAUS-PST  
 ‘Mother had the child walk in the park.’

The fact that the *-te iru* progressive form requires the *o*-causative also corroborates our finding here (cf. (13) and (17b)). Korean also seems to reflect the distinction in point, as indicated below, where the sociative versions prefer the accusative marking, but both dative and accusative marking are equally natural in the case of indirect causation.

- (21) a. *Emeni ka ai lul/?eykey kongwuen eyse kel-li-ess-ta.*  
 mother NOM child ACC/DAT park in walk-CAUS-PST-IND  
 ‘Mother made the child walk in the park.’ (Sociative)
- b. *Emeni ka ai lul/eykey kongwuen eyse ket-key ha-yess-ta.*  
 mother NOM child ACC/DAT park in walk-COMP do-PST-IND  
 ‘Mother had the child walk in the park.’ (Indirect)
- (22) a. *Sensayngnim i haksayngtul ul/?eykey yek kkaci*  
 teacher.HON NOM students ACC/DAT station to  
*kel-li-ess-ta.*  
 walk-CAUS-PST-IND  
 ‘The teacher made the students walk to the station.’ (Sociative)
- b. *Sensayngnim i haksayngtul ul/eykey yek kkaci ket-key*  
 teacher.HON NOM students ACC/DAT station to walk-COMP  
*ha-yess-ta.*  
 do-PST-IND  
 ‘The teacher had the students walk to the station.’ (Indirect)

## 8 Adverbial modification

The pattern of adverbial modification was important in Shibatani’s (1973a, b, c, 1975, 1976b) arguments against deriving lexical causatives from a complex embedding underlying structure and for deriving the *sase* and *-key ha-ta* causatives from an



embedding underlying structure. The argument was based on a contrast similar to the one observed in the following and in parallel Korean examples:

(23) Manner adverbs

- a. *Hahaoya wa kodomo ni yukkuri huku o kise-ta.* (Direct)  
 mother TOP child DAT slowly clothes ACC put on-PST  
 'The mother put the clothes on the child slowly.'
- b. *Hahaoya wa kodomo ni yukkuri huku o ki-sase-ta.* (Indirect)  
 mother TOP child DAT slowly clothes ACC put.on-CAUS-PST  
 'Mother made the child put on the clothes slowly.'

(24) Place adverbs

- a. *Hahaoya wa kodomo o nikai de nekase-ta.* (Direct)  
 mother TOP child ACC upstairs at put.to.sleep-PST  
 'Mother put the child to sleep upstairs.'
- b. *Hahaoya wa kodomo ni nikai de ne-sase-ta.* (Indirect)  
 mother TOP child DAT upstairs at sleep-CAUS-PST  
 'Mother had the child sleep upstairs.'

(25) Time adverbs

- a. *Hahaoya wa kodomo o rokuzi ni okosi-ta.* (Direct)  
 mother TOP child ACC 6 o'clock at wake.up-PST  
 'Mother woke up the child at 6 o'clock.'
- b. *Hahaoya wa kodomo ni rokuzi ni oki-sase-ta.* (Indirect)  
 mother TOP child DAT 6 o'clock at wake.up-CAUS-PST  
 'Mother had the child wake up at 6 o'clock.'

(26) Frequentive adverbs

- a. *Hahaoya wa kodomo o yonaka ni san-kai okosi-ta.* (Direct)  
 mother TOP child ACC night at three-times wake.up-PST  
 'Mother woke up the child three times at night.'
- b. *Hahaoya wa kodomo ni yonaka ni san-kai oki-sase-ta.* (Indirect)  
 mother TOP child DAT night at three-times wake.up-CAUS-PST  
 'Mother had the child wake up three times at night.'

The (b) indirect versions allow adverbs to modify either both the causing event and the caused event or just the caused event, whereas the (a) direct versions are not ambiguous. In (26a), for example, the mother had to wake up the child three times. (26b), on the other hand, allows either the reading in which both the mother's waking up the child and the child's waking up took place three times, or the one in

which only the child's waking up took place three times – the mother could have instructed the child (just once) to wake up three times at night. If an embedding underlying structure were posited for the *sase*-indirect form, it would be easy to explain this ambiguity, as such a structure would allow association of the relevant adverb with either the matrix clause or the embedded clause in the manner shown below:

- (27) a. [*hahaoya ga yonaka ni **san-kai** [kodomō ga oki-] sase-ta*]  
       b. [*hahaoya ga [kodomō ga yonaka-ni **san-kai** oki-] sase-ta*]

If a simplex structure were assumed for the lexical, direct causative form, we would not expect the ambiguous interpretation of adverbial modification to obtain. But, as it turns out, it is not always the case that *sase*-causatives permit ambiguous readings. For example, both joint-action and assistive sociatives necessarily require place and time adverbs to specify that the causing and the caused event both take place in the same location and at the same time. The normal supervision sociative also exhibits the same pattern of modification, and a long-distance supervision sociative permits a place adverb to modify only the caused events as in the following example.

- (28) *Hahaoya wa kodomo ni attino heya de hon o*  
       mother TOP child DAT over.there room in book ACC  
       *yom-ase-te i-ru.*  
       read-CAUS-CONJCT be-PRS  
       'Mother is making the child read the book in the room over there.'

Here it can be the case that only the child is in the room in question while the mother, away from the room, is making sure that the child reads the book in the designated room.

As for manner adverbs, joint-action sociatives behave differently from the assistive and the supervision sociatives. In the former, the causer and the causee are engaged in a joint action, and accordingly a manner adverb cannot modify the causing event and the caused event separately. In (29a) both the mother and the child were walking quickly. The adverb in the assistive form in (29b) is most likely to be interpreted as modifying the manner of the causer, whereas the one in the supervision sociative form in (29c) modifies the caused event.

- (29) a. *Hahaoya wa kodomo o hayaku aruk-ase-te i-ru.* (Joint-action)  
       mother TOP child ACC quickly walk-CAUS-CONJCT be-PRS  
       'Mother is making the child walk quickly.'

- b. *Hahaoya wa kodomo ni kagande kutu o*  
 mother TOP child DAT while squatting shoes ACC  
*hak-ase-te i-ru.* (Assistive)  
 put.on-CAUS-CONJCT be-PRS  
 'Mother is making the child put on the shoes while squatting.'
- c. *Sensei ga kodomotati o massuguni aruk-ase-te i-ru.*  
 teacher NOM children ACC straight walk-CAUS-CONJCT be-PRS  
 'The teacher is making the children walk straight.' (Supervision)

Frequentive adverbs also show different readings depending on the type of sociative causative. They modify both the causing and the caused event in both joint-action and assistive sociative types, whereas in the supervision type they may modify either both the causing event and the caused event or only the caused event, as in (30b).

- (30) a. *Hahaoya wa mainiti kodomo o kooen de asa-yuu*  
 mother TOP every day child ACC park LOC morning-evening  
*ni-kai asob-ase-ru.* (Joint-action)  
 two-times play-CAUS-PRS  
 'Mother makes the child play in the park two times in the morning and evening.'
- b. *Sensei wa kodomotati ni uta o san-kai utaw-ase-ta.*  
 Teacher TOP children DAT song ACC three-times sing-CAUS-PST  
 'The teacher made the children sing the song three times.' (Supervision)

The discussion above shows that the pattern of adverbial modification is not uniform throughout all the *sase* causative forms. This by itself is not a problem for the embedding analysis of these forms. One only needs to stipulate that the adverbial modification works differently depending on the type of causation expressed and that the existence of an embedded clause does not automatically guarantee that an adverb can modify that clause separately from the main clause. The argument goes through only if an embedded clause is made available when a reading obtains in which an adverb singularly modifies that clause. The situation is quite problematic in Korean, however, where the lexical causatives express sociative causation.

The standard arguments, as advanced by Shibatani (1973c) for example, have it that while periphrastic *-key ha-ta* forms allow the reading in which the relevant adverbs modify either both the causing and the caused event or only the caused event, lexical *-i/-hi/-li/-ki* forms do not allow the interpretation where the adverbs modify only the caused event, for in the latter there is claimed to be no embedded clause for the adverbs to be uniquely associated with. This contrast obtains in the

standard direct and indirect causatives, as shown by the English translations of the following examples, where the direct form in (31a) does not allow the interpretation in which the place adverb modifies only the caused event of the child's getting clothed.

- (31) a. *Emeni ka ai eykey pang eyse os ul ip-hi-ess-ta.* (Direct)  
 mother NOM child DAT room in clothes ACC put on-CAUS-PST-IND  
 'Mother put the clothes on the child in the room.'
- b. *Emeni ka ai eykey pang eyse os ul ip-key*  
 mother NOM child DAT room in clothes ACC put on-COMP  
*ha-yess-ta.*  
 do-PST-IND  
 'Mother made the child put on the clothes in the room.' (Indirect)

As pointed out by Song (1988), however, there are lexical causatives that allow the interpretation where an adverb modifies only the caused event. Song (1988: 195, 197) gives the following examples, among others.

- (32) a. *Ku-i ka halwu ey ney pen ssik yak ul*  
 that-person NOM one day in four times each medicine ACC  
*mek-i-ess-ta.*  
 take-CAUS-PST-IND  
 'He/She made [the patient] take the medicine four times a day.'
- b. *Emeni ka ai lul kilka eyse ocwum ul nwu-i-ess-ta.*  
 mother NOM child ACC road.side at urine ACC pee-CAUS-PST-IND  
 'Mother made the child urinate at the roadside.'

As for (32a), Song tells us that if *ku i* 'that person' is understood as a nurse, it is likely that she helps the patient take the medicine four times a day. But if *ku i* 'that person' is understood to be a physician, the most likely interpretation is that the adverb modifies only the caused event of the patient's taking the medicine. (32b) also allows similar interpretations – both the mother and the child could be at the roadside, or only the child. Rather than interpreting these expressions as a case of indirect causation, as Song (1988) does, we would interpret these as cases of sociative causation. When a nurse is understood to be involved in (32a), it is a case of assistive sociative, and we expect the frequentive adverb to modify both the causing event and the caused event. On the other hand, when a doctor's involvement is stipulated, we have a case of long-distance supervision sociative, which allows an adverb to modify only the caused event, as we saw earlier with Japanese examples. (32b) is similar. It can be read either as an assistive sociative or as a long-distance

supervision sociative, and in the latter interpretation the adverb may be understood to modify only the caused event.

Although our interpretation of the facts differs from Song's (1988) and although we maintain that lexical *-i/-hi/-li/-ki* forms do not express the normal indirect causation, the fact that these lexical causatives do allow an adverb to modify the caused event is a serious challenge to the analysis of the adverbial modification pattern in terms of simplex monoclausal vs. embedding biclausal structure. That is, it undermines the arguments for the embedding analysis of *sase* causatives and *-key ha-ta* causatives based on the adverbial modification pattern. The upshot is that the forms of the causatives do not correlate with the pattern of adverbial modification straightforwardly and what is crucial is the types of causative situation different forms express. A similar conclusion can be drawn from the construal pattern of the reflexives.

## 9 Reflexive construal

In the history of generative studies, the pattern of antecedent-reflexive relations has played a significant role in the analysis of Japanese and Korean as well as in a large number of other languages including English. This phenomenon also figured prominently in the arguments of Shibatani (1972, 1973c) for analyzing differently lexical causatives on the one hand and productive *sase* and *-key ha-ta* causatives on the other. As in the case of the adverbial modification pattern, the phenomenon is straightforward when a maximum distinction between direct and indirect causation obtains, as in the following examples.

- (33) a. *Ai ga Hana ni zibun no heya de huku o kise-ta.* (Direct)  
 Ai NOM Hana DAT self of room at clothes ACC put.on-PST  
 'Ai<sub>i</sub> put the clothes on Hana<sub>j</sub> in self's<sub>i/\*j</sub> room.'
- b. *Ai ga Hana ni zibun no heya de huku o ki-sase-ta.* (Indirect)  
 Ai NOM Hana DAT self of room at clothes ACC put.on-CAUS-PST  
 'Ai<sub>i</sub> made Hana<sub>j</sub> put on the clothes in self's<sub>i/j</sub> room.'

With the understanding that only a grammatical subject antecedes the reflexive *zibun* 'self' in Japanese, the facts observed in (33) are straightforwardly accounted for if we posit the following structures for the respective sentences.

- (34) a. [*Ai ga Hana ni zibun no heya de huku o kise-ta*] (33a)  
 b. [*Ai ga [Hana ga zibun no heya de huku o ki-] sase-ta*] (33b)

In (34a) there is only one grammatical subject that can antecede *zibun*. The structure for the *sase*-form in (34b), on the other hand, contains two subjects, one in the main

clause and the other in the embedded clause, either of which can antecede *zibun*, allowing an ambiguous interpretation indicated in the translation for (33b).

Again, sociative causatives present situations where *sase* forms do not align with indirect causatives in a straightforward manner, despite the fact the same morphology is involved. Observe the contrast between the indirect causative and the joint-action sociative form below:

- (35) a. *Ai ga Hana ni zibun no heya de asob-ase-ta.* (Indirect)  
 Ai NOM Hana DAT self of room at play-CAUS-PST  
 'Ai<sub>i</sub> made Hana<sub>j</sub> play in self's<sub>i/j</sub> room.' (Ai told Hana to go play.)
- b. *Ai ga Hana o zibun no heya de asob-ase-te*  
 Ai NOM Hana ACC self of room at play-CAUS-CONJCT  
*i-ru.* (Joint-action)  
 be-PRS  
 'Ai<sub>i</sub> is making Hana<sub>j</sub> play in self's<sub>i/\*j</sub> room.' (Ai is playing with Hana.)

The joint-action sociative form in (b) above does not permit the interpretation in which *zibun* 'self' refers to the causee Hana.

Joint-action and assistive sociatives pattern alike in not allowing the causee nominal to antecede the reflexive.

- (36) Joint-action sociatives
- a. *Hana wa Ken o zibun no ototoo to*  
 Hana TOP Ken ACC self of brother with  
*issyoni asob-ase-te i-ru*  
 together play-CAUS-CONJCT be-PRS  
 'Hana<sub>i</sub> is making Ken<sub>j</sub> play together with self's<sub>i/\*j</sub> younger brother.'
- b. *Hana wa Ken o zibun no omotya de*  
 Hana NOM Ken ACC self of toy with  
*asob-ase-te i-ru.*  
 play-CAUS-CONJCT be-PRS  
 'Hana<sub>i</sub> is making Ken<sub>j</sub> play with self's<sub>i/\*j</sub> toy.'
- c. *Hana wa Ken o zibun no ie kara kooen*  
 Hana TOP Ken ACC self of house from park  
*made aruk-ase-te i-ru.*  
 to walk-CAUS-CONJCT be-PRS  
 'Hana<sub>i</sub> is making Ken<sub>j</sub> walk from self's<sub>i/\*j</sub> house to the park.'

## (37) Assistive sociatives

- a. *Hana wa Ken o zibun no beddo kara okiagar-ase-ta.*  
 Hana TOP Ken ACC self of bed from lift.oneself.up-CAUS-PST  
 'Hana<sub>i</sub> made Ken<sub>j</sub> lift himself up from self's<sub>i/j</sub> bed.'
- b. *Hana wa Ken ni zibun no kutu o*  
 Hana TOP Ken DAT self of shoes ACC  
*hak-ase-te i-ru.*  
 put.on-CAUS-CONJCT be-PRS  
 'Hana<sub>i</sub> is making Ken<sub>j</sub> put on self's<sub>i/j</sub> shoes.'
- c. *Hana wa Ken ni zibun no heya de gohan o*  
 Hana TOP Ken DAT self of room in meal ACC  
*tabe-sase-te i-ru.*  
 eat-CAUS-CONJCT be-PRS  
 'Hana<sub>i</sub> is making Ken<sub>j</sub> eat the meal in self's<sub>i/j</sub> room.'

One must take care in interpreting the assistive sociatives above, because they are also construable as supervision sociatives. For the assistive interpretation, one must imagine a situation where the causer is manually helping the causee to execute the caused event. In (37a), for example, one must picture a situation in which Hana was physically helping Ken to lift himself up from the bed. Under such an interpretation, the causer nominal is the only one that can antecede *zibun*. But if the sentences in (37) were understood as supervision sociatives, either the causer or the causee nominal could antecede the reflexive. For this interpretation, one needs to picture a situation where the causer just stood at the scene and saw to it that the causee executed the caused event on his or her own. Imagine a scene where Hana, having given the instruction, simply watched Ken lift himself up on his own. Under this understanding, (37a) yields an ambiguous reading, because either the causer Hana or the causee Ken can antecede the reflexive.

Clearer supervision sociatives are given below, where, unlike joint-action and assistive sociatives, either the causer or the causee nominal can control the reflexive.

## (38) Supervision sociatives

- a. *Hana wa Ken ni zibun no asi o teineini*  
 Hana TOP Ken DAT self of foot ACC meticulously  
*araw-ase-te i-ru.*  
 wash-CAUS-CONJCT be-PRS  
 'Hana<sub>i</sub> is making Ken<sub>j</sub> wash self's<sub>i/j</sub> feet meticulously.'

- b. *Hana wa Ken ni zibun no heya de hon*  
 Hana TOP Ken DAT self of room in book  
*o yom-ase-te i-ru.*  
 ACC read-CAUS-CONJCT be-PRS  
 ‘Hana<sub>i</sub> is making Ken<sub>j</sub> read a book in self’s<sub>i/j</sub> room.’
- c. *Hana wa Ken ni zibun no namae o*  
 Hana TOP Ken DAT self of name ACC  
*zyukkai kak-ase-te i-ru.*  
 ten.times write-CAUS-CONJCT be-PRS  
 ‘Hana<sub>i</sub> is making Ken<sub>j</sub> write self’s<sub>i/j</sub> name ten times.’

The data above align direct causatives, joint-action sociatives, and assistive sociatives on the one hand, and indirect causatives and supervision sociatives on the other. What is interesting and problematic for morphologically-based analysis of Japanese causatives is the fact that this alignment crosses the lexical/*sase*-causative boundary. The division here harkens back to our earlier discussion on the continuum in the directness dimension of the causative semantics. Joint-action and assistive sociatives, though they both involve the *sase* form, are similar to direct causation, expressed by lexical causatives, in that they all entail direct physical involvement of the causer in the execution of the caused event. The caused event here is not an autonomous event free of the direct involvement of the causer. Supervision sociatives, on the other hand, are like indirect causation in that they both entail an autonomous caused event free of physical intervention by the causer. The distinction drawn here can be seen more clearly in the following event structure diagrams.

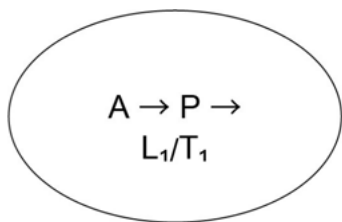


Figure 1: Direct causation

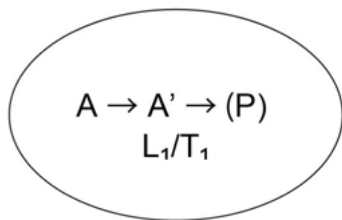


Figure 2: Joint-action/assistive sociative



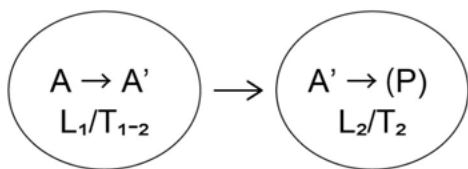


Figure 3: Supervision sociative

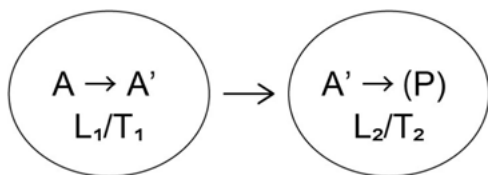


Figure 4: Indirect causation

An arrow in the diagrams above represents an event segment, potentially an autonomous event to be encoded by a verb. Representation  $A \rightarrow A' \rightarrow P$  indicates a transitive action chain, such that A's action carries over to the event segment involving A' and P. This is in fact what happens when A engages in direct causation or joint-action or assistive sociative causation. For example, if A kills P ( $A \rightarrow P \rightarrow$ ), A's causing action carries over to P's dying event ( $P \rightarrow$ ). Similarly, if A assists A' to act on P in an assistive situation, A's causing action ( $A \rightarrow A'$ ) carries over to the caused event by A' ( $A' \rightarrow P$ ). This spatio-temporal overlap between the causing and the caused event is indicated by the  $L_1/T_1$  specification shared by the relevant event segments.

In the case of supervision causation, it is typically the case that the causer is in the causee's proximity (unless it is long-distance supervision). Despite this physical proximity between the causer and the causee, the caused event is accorded its own spatial specification, as there is a physical separation between the causing and the caused event. There is, however, a partial temporal overlap between the two events here. In indirect causation the causing and the caused event are accorded with their own temporal and spatial specifications, though it is possible that they overlap spatially.

In this section we propose to analyze the reflexive phenomenon in terms of the event structures associated with different types of causation. In doing so, we must define possible protagonists that can control the reflexive. All event participants such as A (agent) and P (patient) are potential reflexive-controlling protagonists. But there is a dominance relation such that when A and P co-occur in an event segment, the former outranks the latter. In a simple active transitive event structure including A and P (see Fig. 1), A always controls the reflexive. When two As are involved as in the first segments in Figs. 3 and 4, the initial A is dominant. Although

the second segments in Figs. 1 and 2 have potential protagonists P and A', they are dominated by the initial A, as it is also involved in these segments because of the transitivity of A's actions. On the other hand, the second event segments in Figs. 3 and 4 are autonomous in the sense that they are not dominated by the initial A; hence the A' participant in these event segments functions as a protagonist capable of controlling the reflexive. In other words, whereas there is only one reflexive-controlling protagonist in Figs. 1 and 2, there are two such protagonists in Figs. 3 and 4.

The hierarchy determining the dominance relation reflects the different degrees of cognitive salience different event participants have. The initial agent of an action chain is most salient since it is responsible for the occurrence of the entire event. An agent of an event segment is more salient than a patient because the former also holds the key to the realization of that sub-event. Thus P is least salient among these event participants. With these understandings, we can now formulate the rule of reflexive construal.

(39) Reflexive construal rule<sup>8</sup>

A protagonist controls the reflexive unless it is dominated by a more salient protagonist.

- Protagonist salience hierarchy: A (initial A) > A' (causee A) > P
- A protagonist is dominated by a more salient protagonist when both occur in the same event segment.

In direct causative and joint-action sociative as well as assistive causative expressions, there is only one controller of the reflexive, namely the initial agent of the entire action chain corresponding to the causer; hence in these expressions, the reflexive form is uniquely controlled by the causer nominal (see (36) and (37)). In supervision and indirect causative expressions, on the other hand, there are two protagonist candidates for the controller of the reflexive; hence the possibility of an ambiguous reading arises in these expressions (see (38)).

One of the most interesting aspects of the reflexive phenomenon concerns the notion of autonomous event segment. The basic distinction between Figs. 1 and 2 on the one hand, and Figs. 3 and 4 on the other is that in the latter the caused events are autonomous in the sense that they are free of a more dominant protagonist (namely the initial A), whereas the caused events in the former, being dominated by the initial agent, are non-autonomous. A dominant protagonist of an autonomous event segment can control the reflexive, but that of a non-autonomous event segment cannot.

In both supervision and indirect causation, the caused event is normally autonomous in the sense that it is free from the most dominant protagonist, the initial

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<sup>8</sup> This would have to be modified in accounting for the reflexive construal involving passive sentences.

agent; and thus its protagonist (the causee) controls the reflexive, as in (35a) and (38). Nevertheless, it is possible that a dominant protagonist (the causer) involves himself in the caused event, when, for example, he stays in a specific location where the caused event takes place. Under such circumstances, the caused event is not free of a dominant protagonist, and accordingly it ceases to be an autonomous event segment. As predicted, the protagonist (the causee) of such an event segment fails to control the reflexive. Observe the following sentence:

- (40) *Ken ga Ai ni zibun no heya de piano o hik-ase-ta.*  
 Ken NOM Ai DAT self of room in piano ACC play-CAUS-PST  
 ‘Ken made Ai play the piano in self’s room.’

Understood either as describing a normal indirect causative or as a long-distance supervision causative situation, the sentence above is ambiguous, as the reflexive antecedent could be either Ken or Ai. The ambiguous interpretation is typically associated with a situation where Ken and Ai are both away from either party’s room, and Ken told Ai to go play the piano in either Ken’s or Ai’s room. It is also possible to imagine a situation where Ken told Ai to play the piano in Ken’s own room, and sentence (40), with the understanding that *zibun* refers to Ken, could express such a situation. Now imagine that Ken was in Ai’s room and made her play the piano there. If Ken had told Ai to go play the piano in his room, then (40) would go through with the interpretation that the reflexive refers to Ken. But had both Ken and Ai been in Ai’s room where Ai was to play the piano, then (40) would not describe such a situation. Diagrammatically, this situation looks:

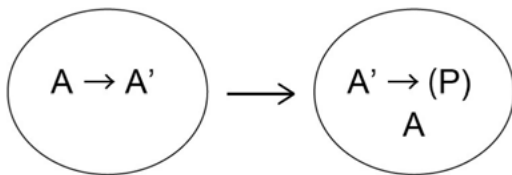


Figure 5: Where a caused event is not free of a dominant protagonist

The situation depicted in Fig. 5 represents a case where the caused event is not free of a dominant protagonist rendering it a non-autonomous event segment. The rule of the reflexive construal given in (39) disallows the causee nominal of such a non-autonomous event segment from controlling the reflexive.

In other circumstances, a dominant protagonist is “automatically” involved in the caused event, rendering it non-autonomous. Most easily imaginable situations are those involving body parts. Observe the following<sup>9</sup>:

<sup>9</sup> Cf. Washio’s (1995) characterization of these forms in terms of the notion of “inclusion”.

- (41) a. *Ken wa Ai ni zibun no heya de hige o sor-ase-ta.*  
 Ken TOP Ai DAT self of room in beard ACC shave-CAUS-PST  
 'Ken<sub>i</sub> made Ai<sub>j</sub> shave his beard in self's<sub>i/\*j</sub> room.'
- b. *Ken wa Ai ni zibun no heya de kata o mom-ase-ta.*  
 Ken TOP Ai DAT self of room in shoulder ACC massage-CAUS-PST  
 'Ken<sub>i</sub> made Ai<sub>j</sub> massage his shoulders in self's<sub>i/\*j</sub> room.'
- c. *Ken wa Ai ni zibun no heya de kami o kir-ase-ta.*  
 Ken TOP Ai DAT self of room in hair ACC cut-CAUS-PST  
 'Ken made Ai cut the hair in self's room.'

Normally sentence (41a) forces the reading where the beard belongs to Ken. When Ai is to shave Ken's beard in her room, Ken would necessarily be in her room. This is similar to the situation depicted in Fig. 5, where the caused event is not autonomous, as it is not free of a dominant protagonist. Sentence (41c) allows the interpretation that the causee Ai controls the reflexive only if we understand that the hair in question was hers and that Ken was not present in her room. If we understand the hair to belong to Ken, then *zibun* unambiguously refers to the causer Ken, because under such a circumstance Ken would be involved in the caused event and the latter accordingly is not free of a dominant protagonist.

Eventually we must ascertain the nature of a dominant protagonist in our account more thoroughly, but for now let us take stock of the implications of our discussion of the reflexive phenomenon so far. The problem of the reflexive construal discussed here has serious implications to the analysis that posits an embedding structure for *sase* causatives and that refers to the grammatical subject as a possible candidate for anteceding the reflexive. Such an analysis cannot account for the fact that sentences (33a), (35b), (36), and (37) do not show ambiguity in the interpretation of the reflexive form; i.e. the subject of the embedded clauses cannot antecede the reflexive in these sentences. A further problem for such an analysis is the fact that lexical causatives in Korean allow a non-subject nominal to antecede the reflexive *caki* 'self'. If lexical causatives are analyzed as having a simplex structure, and if it is assumed that only a grammatical subject can antecede the reflexive, then there is no way of accounting for the fact that in the following example the causee nominal *hwanca* 'patient' can antecede the reflexive form.

- (42) *Kanhosa ka hwanca eykey caki chimtay wuy eyse yak ul*  
 nurse NOM patient DAT self bed top on medicine ACC  
*mek-i-ko iss-ta.*  
 eat-CAUS-CONJCT be-IND  
 'The nurse is making the patient take the medicine on self's bed.'

This sentence can represent two distinct causative situations. In one, the nurse is assisting the patient to take the medicine on the bed. Under this assistive causative interpretation, the reflexive *caki* **can** refer to the nurse, which is pragmatically odd, for the sentence would mean that the nurse is making the patient take the medicine on the former's bed, which is an unusual situation.<sup>10</sup> But the sentence is also construable as representing a supervision causative situation, where the nurse does not herself get physically involved in the execution of the caused event. Under this interpretation, the sentence is ambiguous because *caki* can be controlled by either the causer nominal or the causee nominal.

The examples below are additional cases involving lexical causatives where the interpretation of the reflexive form depends on the understanding of the way the causer is involved in the caused event.

- (43) a. *Emma<sub>i</sub> ka ai<sub>j</sub> eykey caki<sub>i/??j</sub> pang eyse pap*  
 mother NOM child DAT self room in meal  
*ul mek-i-ko iss-ta.*  
 ACC eat-CAUS-CONJCT be-IND  
 'Mother fed the child a meal in self's room.'
- b. *Emma ka ai eykey caki<sub>i/j</sub> pang eyse chayk*  
 mother NOM child DAT self room in book  
*ul ilk-hi-ko iss-ta.*  
 ACC read-CAUS-CONJCT be-IND  
 'Mother is making the child read a book in self's room.'
- c. *Emma ka ai eykey caki<sub>i/j</sub> pang eyse chayk*  
 mother NOM child DAT self room in book  
*ul ilk-key ha-yss-ta.*  
 ACC read-COMP do-PST-IND  
 'Mother made the child read a book in self's room.'

<sup>10</sup> When a grammatically sanctioned reading is pragmatically odd, a pragmatically more plausible reading overrides the former such that *caki chimtay* 'self's bed' in (42) is likely interpreted as referring to the patient's bed even under the assistive sociative reading. Similar override cases are observed in Japanese as well. The reflexives in both sentences below are most likely interpreted as referring to the direct object causee nouns although they are cases of direct causation, which grammatically sanction only the subject causer nouns to act as the reflexive antecedents. (Both do allow the grammatically sanctioned reading of the causer nouns controlling the reflexives, which are, however, pragmatically unusual.)

- (i) *Yengsiki ka Kyenghi lul caki cipe-ey teilyeta cwuessta.*  
 'Yensiki did (her) the favor of taking Kyenghi to self's house.'
- (ii) *Ken ga Ai o zibun no ie ni okutte itte yatta.*  
 'Ken did (her) the favor of escorting (literally "send-go") Ai to self's house.'

The most straightforward interpretation for (43a) is that the mother either spoon-feed the child or helps the child eat by bringing the food to his mouth. As such the initial agent mother is the most likely antecedent for (43a). Example (43b) can be interpreted either as the assistive or the supervision causative allowing an ambiguous interpretation of the reflexive. Example (43c) is most likely understood as conveying indirect causation, which allows either the initial causer agent or the causee agent, who may not be dominated by the initial agent in the caused event segment, to function as the controller of the reflexive.

Our discussion above indicates that it does not matter for the reflexive construal whether we have productive *sase* causatives, as in the Japanese case, or lexical causatives, as in the Korean case above. Reflexive construal operates in terms of the event structure according to the rule in (39). This predicts that Korean periphrastic *-key ha-ta* constructions also show the relevant facts about the reflexive *caki*. While this construction normally expresses indirect causation in which the caused event constitutes an autonomous event segment free of a dominant protagonist, there can be situations in which the caused event is rendered non-autonomous because of the involvement of the causer. Again, situations involving body parts present themselves as a test case.

- (44) *Yengsiki ka Kyenghi eykey caki pang eyse meli lul calu-key*  
 Yengsiki NOM Kyenghi DAT self room in hair ACC cut-COMP  
*ha-yess-ta.*  
 do-PST-IND  
 ‘Yengsiki made Kyenghi cut the hair in self’s room.’

Just like Japanese example (41c), this sentence is ambiguous only if the hair in question is understood to belong to Kyenghi. If it is understood to belong to Yengsiki, then the sentence is unambiguous, barring the construal of *caki* as the causee Kyenghi.

A number of additional constructions support the analysis of the reflexives presented above. The Japanese *-te morau* ‘to get something done’ construction is used as an expression of less coercive causation, as in the following example.

- (45) *Ken wa Hana ni zibun no heya de piano o*  
 Ken TOP Hana DAT self of room in piano ACC  
*hii-te morat-ta.*  
 play-CONJCT receive-PST  
 ‘Ken<sub>i</sub> got Hana<sub>j</sub> to play the piano in self’s<sub>i/j</sub> room.’

As indicated in the translation, the sentence is ambiguous as to which nominal, the causer or the causee, is to be taken as the antecedent of the reflexive, indicating that the event of Hana’s playing the piano can be an autonomous event segment in this

construction. Or, this sentence can be construed as representing a situation where Ken was also in Hana's room. Under such a reading, the reflexive is uniquely identified with the dominant protagonist, namely the causer Ken. As in the case of the regular *sase*-causatives, we can easily construct situations where we are forced to assume the involvement of a dominant protagonist in the caused event, rendering it non-autonomous. In such situations the causee cannot control *zibun*, as expected. Observe:

- (46) a. *Ken wa Hana ni zibun no heya de hige*  
 Ken TOP Hana DAT self of room in beard  
*o sot-te morat-ta.*  
 ACC shave-CONJCT receive-PST  
 'Ken<sub>i</sub> got Hana<sub>j</sub> to shave his beard in self's<sub>i/\*j</sub> room.'
- b. *Ken wa Hana ni zibun no heya de kata*  
 Ken-TOP Hana DAT self of room in shoulder  
*o mon-de morat-ta.*  
 ACC massage-CONJCT receive-PST  
 'Ken<sub>i</sub> got Hana<sub>j</sub> to massage his shoulders in self's<sub>i/\*j</sub> room.'
- c. *Ken wa Hana ni zibun no heya ni tome-te morat-ta.*  
 Ken TOP Hana DAT self of room in put up-CONJCT receive-PST  
 'Ken<sub>i</sub> got Hana<sub>j</sub> to put him up in self's<sub>i/\*j</sub> room.'

One major extension of our account is needed in accounting for the reflexive construal in Japanese passive constructions, where so-called direct passives and indirect passives show difference in the interpretation of the reflexive form, suggesting monoclausal underlying structures for the former and the embedding biclausal structures for the latter. We will not pursue the relevant issues involving passive constructions here because such discussions would go beyond the charge of this chapter (see Shibatani and Chung 2001 for an attempt to extend the above account to passive constructions). Our discussions above, however, make it abundantly clear that the traditional generative transformational accounts advocated by Shibatani (1973b) and Kuroda (1993) that assign monoclausal deep structures for lexical causatives and biclausal deep structures for productive forms are not really supported by the adverb interpretation and reflexive construal evidence. These phenomena, rather, suggest that some lexical causatives are similar to productive causatives, and that the reverse is also true, nullifying the force of these argument in support of the traditional analysis. Proper accounts of the adverbial and reflexive phenomena require recourse to more abstract event structures than the deep structure representations of the monoclausal/biclausal distinction, rendering the latter insufficient and unnecessary.

## 10 Summary and future prospects

We have presented an overview of research on causative constructions in Japanese and Korean focusing primarily on the period from the 1970s to the present day and giving consideration to both language-internal and inter-linguistic patterns among morphology, semantics, and syntax. In the long history of research on causatives stretching over some 40 years, what have been particularly difficult to resolve have been semantic problems as it has become clear that not only the forms of the causatives but also such grammatical factors as grammatical aspect and the case marking of the causee are closely linked to the semantic interpretation.

The goal of linguistic research, of analyzing the correspondence between form and meaning, allows two perspectives. One asks the question of how forms convey meaning, and the other asks how forms reflect conceptualization of a real world situation. Both of these perspectives are essential in linguistic research, but the research on causatives, as in many other research domains, has leaned toward the former perspective. The latter perspective, which would shed light on the use of lexical causatives for indirect causative scenes such as *Hitler killed millions of Jews* and *I cut my hair short (at the hair salon)*, requires sorting out various factors that contribute to our understanding of the world, such as our encyclopedic knowledge about the referents of the NP arguments involved and the socio-cultural context, including customs and social institutions, that support and sanction the usage patterns of verbs and verb phrases.

There are several other important issues surrounding causatives that we have not been able to cover in this chapter. One of them is a mismatch phenomenon due to non-increase in valency, which has been alluded to in both Japanese and Korean (Miyaji 1964, Shibatani 1973a, Sadanobu 1991, Park 1994, Chung 2006, among others). Also, due to space considerations, we were unable to take up the relation between causatives and passives. In Korean the suffixes *-i/-hi/-li/-ki* are also used for passives, and in Japanese similarities between causatives and passives have also been mentioned, including the valency-increasing property of so-called indirect passives (see the Washio contribution to this volume). Finally, the question of how event structure representations such as Figures 1-4 are mapped onto syntactic structures has been a perennial issue not only for causatives but also for relationship between the event/conceptual structures and syntactic structures in general. Especially interesting is the question of how typological differences such as morphological causatives vis-à-vis analytic types such as compound forms (like the French *faire*-causatives) and the Korean *-key ha-ta* periphrastic type are realized in the mapping process.



## Acknowledgements

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## 5 Entailed and intended results in Japanese and Burmese accomplishment verbs

### 1 Introduction

Vendler (1967) categorized the meanings expressed by English verbs into the four categories of activities, accomplishments, achievements, and states, depending on their temporal characteristics. This categorization can be applied to a variety of languages, but caution should be paid to the fact that semantically similar verbs in different languages may belong to different categories. For example, the English verb *know* is a state verb but the Japanese verb considered to correspond to it lexically, *shiru*, is an achievement verb meaning ‘get to know’ and must have *-te iru* showing the result of change attached in order to express a current state. In the same way, the meanings of verbs in different languages considered to belong to the same category may show differing behaviors. For example, the English accomplishment verb *kill* cannot be used in a sentence like (1).

- (1) \**I killed him, but he didn’t die.*

Since *kill* entails that a causative action by the agent causes the event of ‘dying’ on the part of the patient, affirming the action of “killing” in the first conjunct and denying the event of “dying” in the second conjunct is logically contradictory. However, according to Tai (1984), no semantic contradiction arises in the following sentence in Chinese (notation follows Tai).

- (2) *Zhangsan sha-le Lisi liangci, Lisi dou mei si.*  
Lit. ‘Zhangsan killed Lisi twice, but he didn’t die.’

According to Tai (1984), since the Chinese verb *shā* ‘kill’ does not entail the result “die”, (2) is not contradictory. As is apparent from a comparison of English *kill* and Chinese *shā*, even verbs that lexically correspond across languages can show differing semantic and syntactic behaviors. Based on examples like (2), Tai (1984) claims that Chinese does not have accomplishment verbs, but Liu (2006: 14–17) argues to the contrary that Chinese does have accomplishment verbs. This chapter will advance its arguments on the premise that *shā* ‘kill’ is an accomplishment verb.

The same phenomenon as was seen in Chinese is also observed in Burmese.

- (3) *ṭù mahlâ=gò ṭaʔ=tê. dâ=bêmê mahlâ mǎ-ṭê=bú.*  
3sg PN=KO kill=REAL this=though PN NEG-die=NEG  
‘He killed Ma Hla. But Ma Hla didn’t die.’

Example (3) is a single utterance from a single speaker and is composed of one clause meaning that ‘he killed Ma Hla’ and the second that ‘Ma Hla did not die’. The Burmese example in (3) resembles the English example in (1) syntactically, but, as with the Chinese example (2), semantically there is no logical contradiction.

Although not to the same extent as Chinese or Burmese, a similar phenomenon has been noted in Japanese language research. In particular, Ikegami (1981: 249–283) claims that, in contrast to English, which is a *suru*-type (DO-type) language with a strong goal orientation and does not allow expressions like (1), Japanese is a *naru*-type (BECOME-type) language with weak goal orientation and, because of this characteristic, forms sentences like (4) without semantic contradiction.

- (4) *Moyasi-ta keredo, moe-nakat-ta.*  
 burn(vt)-PST although burn(vi)-NEG-PST  
 ‘(I) burned (it), but (it) didn’t burn.’

Example (4) is a single sentence from a single speaker and, while using the causative transitive verb *moyasu* in the first clause, uses the negated form of the intransitive verb *moeru* in the second clause. As will be argued later, what is intended in this sentence is the description of a situation in which “I lit the target object (patient) on fire but it did not burn sufficiently (to the extent I intended).” In other words, some action was taken toward the patient and as a result a change in the patient did occur, but it did not reach the intended state. Tsujimura (2003) calls this phenomenon “event cancellation”, but since the event of igniting does take place, this terminology is misleading. A better term might be “result cancellation” or “result suspension”. This phenomenon does not, however, occur as freely as Ikegami (1981) supposes. As Miyajima (1985) pointed out, the acceptability varies considerably depending on the specific verb or context and by speaker.

To sum up the observations above, Japanese appears to be located somewhere between English and Chinese with regard to the phenomenon of “result cancellation (suspension)” of accomplishment verbs. The purpose of this chapter is to clarify the essential nature of this phenomenon in Japanese through comparison with Burmese. Section 2, after first outlining general characteristics of Burmese, will describe result cancellation with accomplishment verbs in Burmese. Next, Section 3 will review the important previous research on Japanese and Section 4 will consider in detail factors that make this phenomenon possible in Japanese. In Section 5 it will be argued that the result of an accomplishment verb in Burmese is an “intended result” and Section 6 will suggest directions for further research on similar phenomena in the languages of East Asia, Southeast Asia, and South Asia.

## 2 Result cancellation with accomplishment verbs in Burmese

Previous research describing the possibility of result cancellation with accomplishment verbs in Burmese is, to the best of my knowledge, limited to Thin Aye Aye Ko (2002) and Kato (2015). Thin Aye Aye Ko (2002) was the first to mention this phenomenon in Burmese, but stopped with simply indicating the existence of the phenomenon. Kato (2015) tested whether or not cancellation of attainment of a result was possible with a variety of verbs in Burmese and argued with regard to the use of volitional verbs in Burmese that reaching the end point of an event was not entailed. Kato (2015) also treats the phenomenon of denial of the realization of an action itself, as in ‘I stood. But I could not stand’, but, for the sake of comparison with Japanese, this chapter will deal only with sentences including accomplishment verbs.

Burmese is an analytic, SOV language belonging to the Tibeto-Burman group of the Sino-Tibetan language family. Following the verb at the end of the sentence is an obligatory particle that Okell (1969) calls a “verb-sentence marker” that expresses modality, including realis versus irrealis. The semantic/grammatical role of a noun in the sentence is also expressed by a following particle. As shown in (5) and (6), the subject of both transitive and intransitive sentences is marked by the particle *=kâ/=gâ* and the direct object of a transitive sentence is marked by the particle *=kò/=gò*.<sup>1</sup> On this point, Burmese can be said to be a nominative-accusative language. Since the particles on the subject and object are not obligatory, they are enclosed in parentheses.

- (5) *ηâ(=gâ) thàin=dè.*  
 1sg=KA sit.down=REAL  
 ‘I sat down.’

- (6) *ηâ(=gâ) ?édì tǎyε?í(=gò) sá=dè.*  
 1sg=KA that mango=KO eat=REAL  
 ‘I ate that mango.’

An important semantic factor in the classification of Burmese verbs is volitionality. Based on volitionality, all Burmese verbs can be classified as either volitional verbs or as non-volitional verbs (Kato 2010, 2015). Volitional verbs depict events accompanied by volition and non-volitional verbs those not accompanied by volition.

<sup>1</sup> With many of the Burmese particles that begin with a voiceless consonant, the first consonant (aside from consonants that follow a glottal stop) is replaced by its voiced counterpart. Particles *=kâ/=gâ* and *=kò/=gò* are such examples. In this chapter, whenever such particles are cited, both voiceless and voiced forms are shown before and after slashes respectively.

This is a fundamental division of Burmese verbs. For example, since *mê* ‘forget’ is a non-volitional verb, the sentence *mê=dê* (forget=REAL) ‘(I) forgot (it)’ always shows non-volitional forgetting and cannot be used to express a situation of forgetting on purpose. In order to express forgetting on purpose, a speaker must use the auxiliary verb *=lai?*, which expresses intention, and say *mê=lai?=tê*. Conversely, the sentence *kàin=dê* (touch=REAL) ‘(I) touched (it)’ using the volitional verb *kàin* ‘touch, hold’ can only be used to describe a situation in which the touching is intentional. In order to express a situation in which someone unconsciously touched something, an auxiliary verb expressing inadvertency, *=mî* is used, as in *kàin=mî=dê*.

According to Tsujimura (2003), the phenomenon of the cancellation of the meaning of a result that accomplishment verbs should have is archetypically observed in Japanese with transitive-intransitive verb pairs that are morphologically related, like the *moyasu-moeru* pair in (4). Japanese is rich in this kind of transitive-intransitive pairs, including such verbs as *oru* – *oreru* ‘break vt/vi’, *kiru* – *kireru* ‘cut/be cut’, *yaku* – *yakeru* ‘bake/be baked’, *otosu* – *ochiru* ‘drop/fall’, *tomeru* – *tomaru* ‘stop vt/vi’, *kesu* – *kieru* ‘extinguish/be extinguished’, *kowasu* – *kowareru* ‘crush/ be crushed’, *nagasu* – *nagareru* ‘wash away/flow’, *ireru* – *hairu* ‘insert/enter’ (Hayatsu 1989; Kageyama and Jacobsen [eds.] 2017). As shown by Cornyn and McDavid (1943) and Okell (1969: 205-208), Burmese also has a considerable number of morphologically related transitive-intransitive pairs. Cornyn and McDavid list over 70 such pairs. In the case of Burmese, since there are cases like *chau?* ‘frighten’ and *cau?* ‘fear’ in which both are transitive, rather than referring to the pairs as transitive-intransitive, it would be more accurate to call the opposition “causative” versus “non-causative”. Some representative examples are given in Table 1.

**Table 1:** Morphological pairs of causative and non-causative verbs in Burmese

Causative	(transitive)	Non-causative	(intransitive)
<i>châ</i>	‘drop’	<i>câ</i>	‘drop’
<i>chau?</i>	‘frighten’	<i>cau?</i>	‘fear, to be afraid’
<i>chê?</i>	‘cook’	<i>cê?</i>	‘get cooked’
<i>chô</i>	‘bend, break (as a stick)’	<i>cô</i>	‘get bent’
<i>hlê</i>	‘knock down’	<i>lê</i>	‘fall down’
<i>hmyîn</i>	‘elevate’	<i>myîn</i>	‘high’
<i>hnó</i>	‘awaken’	<i>nó</i>	‘wake up’
<i>ka?</i>	‘attach, stick’	<i>ka?</i>	‘get attached’
<i>khau?</i>	‘fold’	<i>kau?</i>	‘get crooked’
<i>pei?</i>	‘close’	<i>pei?</i>	‘close’
<i>phwîn</i>	‘open’	<i>pwîn</i>	‘open’
<i>phyê?</i>	‘break’	<i>pyê?</i>	‘get broken’

As shown in Table 1, the causative versus non-causative verb opposition is commonly expressed by aspiration or non-aspiration of the initial consonant (e.g. /ch/

vs. /c/, /kh/ vs. /k/) or by non-voicing versus voicing of the initial consonant (e.g. /hl/ vs. /l/, /hm/ vs. /m/). However, there are also cases of both verbs taking the same form, as in *kaʔ* ‘attach; be attached’ and *peiʔ* ‘close; close by itself’. In addition, there are cases like *ôʔ* ‘burn’/ *lâun* ‘get burnt’, *ʔaʔ* ‘kill’ / *ʔè* ‘die’, and *hlân* ‘dry’/ *chauʔ* ‘get dry’ in which the semantically contrasting verbs are realized in morphologically unrelated forms. In all cases, however, the causative verbs all share the characteristic of being volitional verbs while the non-causative verbs are all non-volitional verbs.

It is possible to freely form sentences like (7) through (14) using the causative and non-causative verbs pairs in Burmese. In the first clause of each of these examples, the causative verb indicates some specific action while the non-causative verb of the second clause, uttered by the same speaker, denies achievement of the resulting state that the semantic structure of the causative verb should contain.<sup>2</sup> This pattern is possible with no problems even in cases like *kaʔ* ‘attach, get attached’ where the causative and non-causative verbs share the same form.

- (7) *mí* *ôʔ=dê.* *dâ=bêmê* *mă-lâun=bú.*  
 fire burn(vt)=REAL this=though NEG-burn(vi)=NEG  
 ‘(I) burnt (it), but (it) didn’t burn.’
- (8) *ʔû=gò* *ʔaʔ=tê.* *dâ=bêmê* *mă-ʔè=bú.*  
 3sg=KO kill=REAL this=though NEG-die=NEG  
 ‘(I) killed him, but (he) didn’t die.’
- (9) *châ=dê.* *dâ=bêmê* *mă-câ=bú.*  
 drop(vt)=REAL this=though NEG-drop(vi)=NEG  
 ‘(I) dropped (the cup), but (it) didn’t drop.’
- (10) *chó=dê.* *dâ=bêmê* *mă-có=bú.*  
 bend(vt)=REAL this=though NEG-bend(vi)=NEG  
 ‘(I) bent (a stick), but (it) didn’t bend.’
- (11) *hlê=dê.* *dâ=bêmê* *mă-lê=bú.*  
 knock.down=REAL this=though NEG-fall.down=NEG  
 ‘(I) knocked down (the tree), but (it) didn’t fall down.’
- (12) *phwîn=dê.* *dâ=bêmê* *mă-phwîn=bú.*  
 open(vt)=REAL this=though NEG-open(vi)=NEG  
 ‘(I) opened (the window), but (it) didn’t open.’

<sup>2</sup> In Burmese, when the main clause verb is negated, the verb will be prefixed with *mă-* and be followed by the clitic *=phú/=bú*.

- (13) *phyεʔ=tê. dâ=bêmê mǎ-pyεʔ=phú.*  
 destroy=REAL this=though NEG-break(vi)=NEG  
 ‘(I) destroyed (the machine), but (it) didn’t get destroyed.’
- (14) *kaʔ=tê. dâ=bêmê mǎ-kaʔ=phú.*  
 attach=REAL this=though NEG-attached=NEG  
 ‘(I) attached (the sticker), but (it) didn’t get attached.’

What should be noted here is that this sort of statement negating achievement of a resulting state is indisputably acceptable for any speaker. This contrasts with the case of the relevant phenomenon in Japanese, to be described in the next section, for which the degree of acceptability varies depending both on the speaker and on the particular verb. On this point, Japanese and Burmese differ greatly.

### 3 Result cancellation in Japanese

The phenomenon of cancellation of the resulting state of accomplishment verbs in Japanese was pointed out by Ikegami (1981, 1985) and has also been discussed by Miyajima (1985), Kageyama (1996), Alam Sasaki (2001)<sup>3</sup>, Tsujimura (2003). Sato (2005), Ezure (2006), and Aoki and Nakatani (2013a, b), among others.

Besides *moyasu* ‘burn (vt)’ – *moeru* ‘burn (vi)’ in example (4) above, Ikegami (1981: 266) also gave examples using verbs like *wakasu* ‘boil (vt)’ – *waku* ‘boil (vi)’, and *ukaberu* ‘float (vt)’ – *ukabu* ‘float (vi)’.

- (15) *Wakasi-ta keredo, wak-anakat-ta.*  
 boil (vt)-PST although boil (vi)-NEG-PST  
 ‘(I) boiled (it), but (it) didn’t boil.’
- (16) *Hune o ukabe-ta keredo, ukab-anakat-ta.*  
 boat ACC float (vt)-PST although float (vi)-NEG-PST  
 ‘(I) floated the boat, but (it) didn’t float.’

As Ikegami (1981: 266) points out, the English equivalents to these sentences are unacceptable.

<sup>3</sup> Alam Sasaki (2001) discussed the negatability of the result using sentences including the pattern *~te mo ... ~nakatta* [~GER even ... ~NEG.PST] ‘Even though (I) ~ed, (it) didn’t ~’ as in, for example, *Moyasite mo moenakatta* ‘Even though (I) burned (it), (it) didn’t burn.’ Since the inflectional ending *-te* (the so-called “conjunctive form”) does not necessarily entail the completion of an event, the pattern *~te mo ... ~nakatta* should not be used as a test of negatability of the result.



- (17) a. \*I burned it, but it didn't burn.  
 b. \*I boiled it, but it didn't boil.  
 c. \*I floated the boat, but it didn't float.

Ikegami also provides (18) with *korosu* 'kill' as an example in which cancellation of a result is not acceptable. It was already shown in (1) in the introduction that the English equivalent is also unacceptable.

- (18) \**Kare o korosi-ta keredo, sin-anakat-ta.*  
 he ACC kill-PST although die-NEG-PST  
 Lit. '(I) killed him, but (he) didn't die.'

According to the observations in Ikegami (1981), the possibility of result cancellation being acceptable is generally higher in Japanese compared to English.

A variety of theoretical analyses have been presented regarding the reasons this kind of result cancellation is possible in Japanese and conditions under which it occurs. Kageyama (1996: 275–291) explains the phenomenon by means of the Lexical Conceptual Structure of accomplishment verbs. Accomplishment verbs like *korosu* 'kill' or *moyasu* 'burn (vt)', can be represented with the LCS shown in (19). Here, ACT ON corresponds to the causing activity part. CAUSE shows that the event on the right is brought about by that activity. BE AT shows the final state.

- (19) ACTIVITY —————> CHANGE ———> RESULT  
 [x ACT ON y] CAUSE [y BECOME [y BE AT-z]]

Presenting the figure in (20) Kageyama proposed to account for the differences between English, Japanese, and Chinese as follows: In English, the vantage point is at the ACT ON, that is, at the activity. In Japanese, the vantage point is at the BECOME and in Chinese it is placed at the BE AT. In the figure, the "•" shows the positioning of the vantage point.

- (20) Viewpoints and language types (Kageyama 1996)
- |          |        |   |
|----------|--------|---|
|          |        | [x ACT ON y] CAUSE [y BECOME [y BE AT-z]] |
| English  | •      | —————>                                    |
| Japanese | <————— | • —————>                                  |
| Chinese  | <————— | —————•                                    |

According to Kageyama (1996), the reason why denying a result is difficult in English but possible in Japanese is due to the difference in vantage point. In a language like English that places the vantage point with the activity, the result is visible from the activity and negation of the result is impossible. On the other hand, in Japanese,

since the view point is placed on the resulting event, the result is not visible from the activity. This he claims, is why the phenomenon is possible. In Chinese, since the vantage point is further to the right than in Japanese, negation of the result is easier than in Japanese.

Tsujimura (2003) argued that Japanese lexical causative verbs were underspecified for telicity and that the telic interpretation arises through conversational implicature. According to her, since the result realization is an implicature, the result can be denied.

Sato (2005: 99–113) argued that when a verb that includes both an activity and a result in semantic structure expresses only the activity through the operation of metonymy, this phenomenon becomes possible. Ezure (2006) claims that this phenomenon becomes possible when the activity part of an accomplishment undergoes a focusing operation. Furthermore, Aoki and Nakatani (2013a, b) reject Tsujimura's theory that Japanese lexical causative verbs are underspecified for telicity and claim that the strength of the process component in the semantics of the verb increases the acceptability of result cancellation.

Whatever the reason this phenomenon is possible in Japanese may be, there is one important thing to keep in mind. That is the fact that the acceptability of cancellation of the result of an accomplishment verb varies greatly by depending on the speaker. This problem is taken up in the next section.

## 4 Various factors making result cancellation possible

This section will attempt to clarify the character of the phenomenon by which the result of an accomplishment verb can be cancelled by comparing Japanese and Burmese.

### 4.1 Speakers who do not allow result cancellation

In contrast to Burmese, in which result cancellation is possible with no problem, as shown in (7) through (14), there are many speakers who do not allow result cancellation in Japanese. Miyajima (1985) conducted an extremely important survey regarding this phenomenon. He presented 19 sentences including result cancellation to speakers and had them rate the acceptability of the sentences on a three-point scale: “Natural”, “Somewhat unnatural but usable”, and “Completely unnatural”. Below are two of the sentences used in Miyajima's survey.

- (21) *Kinoeda o moyasi-ta keredo, moe-nakat-ta.*  
 branch ACC burn(vt)-PST although burn(vi)-NEG-PST  
 ‘(I) burned a branch, but (it) didn’t burn.’
- (22) *Taroo wa Ziroo o korosi-ta keredo, Ziroo wa sin-anakat-ta.*  
 Taro TOP Jiro ACC kill-PST although Jiro TOP die-NEG-PST  
 ‘Taro killed Jiro, but Jiro didn’t die.’

According to Miyajima (1985), of the 100 people in his Group A, 30 rated (21) as “Natural”, 48 as “Somewhat unnatural but usable”, and 22 rated it as “Completely unnatural”. On the other hand, (22) was rated “Natural” by 7 people, “Somewhat unnatural but usable” by 18 people and “Completely unnatural” by 75 people. That is, regarding sentence (21), which is similar to the example (4) that Ikegami (1985) considered acceptable, 70 people out of 100 felt the sentence to be unnatural to a greater or lesser degree. Conversely, sentence (22), which is similar to the unacceptable (18), was judged to be “usable” by 25 out of 100 people.

That is to say, whether this phenomenon is acceptable or not varies greatly by speaker. Moreover, there are always some speakers who consider the sentence to be unacceptable no matter what verb is used. The sentence judged “Completely unacceptable” by the most speakers was (22). Even the sentence that had the fewest “Completely unacceptable” ratings, given as (23) below, and which was rated “Natural” by 65 people and “Somewhat unnatural but usable” by 24 people, still had 11 people rate it as “Completely unnatural”.

- (23) *Suika o hiyasi-ta keredo, tumetaku nar-anakat-ta.*  
 watermelon ACC cool(vt)-PST although cool become-NEG-PST  
 ‘(I) cooled a watermelon, but (it) didn’t become cool.’

The situation in Japanese shows a striking contrast with that in Burmese in which (7) through (14) were considered acceptable by all speakers. Accordingly, this phenomenon should not be thought of in Japanese in terms of a binary choice of acceptable or not acceptable. Rather, the phenomenon must be treated by taking each sentence as being of a higher or lower degree of acceptability. In order to find the reasons for the difference in acceptability in Burmese and Japanese, it is necessary to look closely at differences in the semantics of the two languages.

## 4.2 Semantic differences between result cancellation in Burmese and in Japanese

First, compare Burmese (3) and Japanese (22), both of which use the verb for ‘kill’. Sentence (3), *tù mâhlâ=gò ʔaʔ=tè. dà=bêmê mâhlâ mǎ-tè=bú* ‘He killed Ma Hla. But

Ma Hla didn't die', is usable to express the following situations: (A) "He intended to kill Ma Hla and stabbed Ma Hla with a knife. However, she did not die." Or it can even be used to express a situation in which the action did not reach the target: (B) "He intended to kill Ma Hla and tried to stab her with a knife. However, since the knife he stabbed at her with did not reach Ma Hla, she did not die." On the other hand, most of the speakers who considered (22), *Taroo wa Ziroo o korosi-ta keredo, Ziroo wa sin-anakat-ta* 'Taro killed Jiro, but Jiro didn't die', natural were probably thinking of a situation like, for example, the following: (C) "Taro intended to kill Jiro and stabbed Jiro with a knife. Since Jiro lay motionless, Taro thought Jiro had died. However, Jiro's life was miraculously saved."

The difference between Burmese and Japanese is clear here. In the case of Burmese, the actor knows that Ma Hla is not dead. In the Japanese case, however, cancellation is possible in the case where the actor believes the patient to be dead. The reason the majority of people consider (22) unnatural can be thought to be that it is difficult for a situation to arise in which one who can be thought to have died comes back to life. The Burmese example (3) can also be used to express situation (C), but the important point is that it can also be used to express situations (A) and (B).

Next, compare Burmese (7) and Japanese (21), both of which use verbs meaning 'burn'. (7), *mí cō=dē. dā=bēmē mǎ-làun=bú* '(I) burnt (it), but (it) didn't burn', can be used to express the following situation: (D) "I lit a match, intending to burn a tree branch. I applied the flame to the branch, but because the branch was wet, it did not burn at all." Or, it can be used for (E) "I lit a match intending to burn a tree branch. I applied the flame to the branch, but the wind blew and the flame went out, so the branch didn't burn."

In contrast, speakers who judged (21) acceptable were probably thinking of a situation like: (F) "I lit the tree branch on fire. The branch burned a little, but the wind blew up and the fire went out. Therefore, the branch did not burn up completely."

The difference between Burmese and Japanese is clear in this case as well. In the situations described by Burmese (7), the tree branch did not catch fire right from the start. Japanese (21), however, expresses a situation in which the branch partially burned but did not burn up completely. People who could think of such a situation probably felt (21) to be natural. Since the event of "burning partially" and the event of "burning up completely" are different events, denying the latter does not mean denying the former. Burmese (7) can also express the situation in (F), but the fact that it can express (D) and (E) is what is important.

### 4.3 Incomplete realization of the result

In Section 4.2, it was observed that, in contrast to Burmese accomplishment verbs for which a reading was possible in which the change event has not taken place at

all, in Japanese, the change event has arisen and the result of the change is in an incomplete form. This is a big difference between Japanese and Burmese. Let us try looking more closely at Japanese, based on this difference.

The survey in Miyajima (1985) is suggestive with regard to this phenomenon. Based on the survey described earlier, Miyajima assigned points measuring the acceptability of result cancellation depending on the verb. He assigned 1 point for a “Natural” response, 0.5 points for a “Somewhat unnatural but usable” response, and 0 points for a “Completely unnatural” response and calculated a score for each verb, with 100 points as the highest possible total. The results are given below. Verbs in Miyajima’s sample that cannot be considered accomplishment verbs have been omitted.

- (24) *korosu* ‘kill’ (17.0), *otosu* ‘drop’ (22.0), *kowasu* ‘break’ (24.0), *nuku* ‘pull out’ (26.5), *akeru* ‘open’ (31.5), *wakasu* ‘boil’ (34.5), *hirogeru* ‘widen’ (36.0), *ireru* ‘put in’ (45.3), *ugokasu* ‘move’ (46.0), *yowameru* ‘weaken’ (46.0), *moyasu* ‘burn’ (53.0), *kawakasu* ‘dry’ (56.5), *hiyasu* ‘cool’ (66.0)

Dividing the results in (24) into 10 point groups, gives the table in (25).

(25)

10–19	20–29	30–39	40–49	50–59	60–
<i>korosu</i> ‘kill’	<i>nuku</i> ‘pull out’, <i>kowasu</i> ‘break’, <i>otosu</i> ‘drop’	<i>hirogeru</i> ‘widen’, <i>wakasu</i> ‘boil’, <i>akeru</i> ‘open’	<i>yowameru</i> ‘weaken’, <i>ugokasu</i> ‘move’, <i>ireru</i> ‘put in’	<i>kawakasu</i> ‘dry’, <i>moyasu</i> ‘burn’	<i>hiyasu</i> ‘cool’

The verbs on the right, *hiyasu* ‘to cool’, *kawakasu* ‘dry’, *moyasu* ‘burn’ have results that have a scalar structure (See Hay, Kennedy, and Levin 1999; Kennedy and McNally 1999, 2005; and Tsujimura 2001 concerning “scalar structure”). Taking *hiyasu* ‘to cool’ as an example, the result contained in its semantic structure, “a cooled state”, can have different levels, such as “very cool” or “less cool”. For that reason, the “cooled state” can have a temporal span and one can say, for example, *gohunkan hiyasita* ‘(I) cooled (it) for five minutes.’ The verbs *kawakasu* ‘dry’ and *moyasu* ‘burn’ are the same: *gohunkan kawakasita* ‘(I) dried (it) for five minutes’; *gohunkan moyasita* ‘(I) burned (it) for five minutes.’

On the other hand, the verbs on the left side, *korosu* ‘kill’, *otosu* ‘drop’, *kowasu* ‘break’, and *nuku* ‘pull out’, for example, do not have a scalar structure. For example, the “state of being dead” does not have stages of “very dead” or “less dead”. Because of this characteristic, the “state of being dead” cannot have a temporal span and one cannot say \**gohunkan korosita* ‘(I) killed (him) for five minutes.’ The verbs *otosu* ‘drop’, *kowasu* ‘break’, and *nuku* ‘pull out’ are the same: \**gohunkan otosita* ‘(I) dropped (it)

for five minutes'; \**gohunkan kowasita* '(I) broke (it) for five minutes'; \**gohunkan nuita* '(I) pulled (it) out for five minutes.'

When a result shown by a verb has a scalar structure, it is easy for a speaker to imagine a situation in which the level of the result actually achieved does not reach the level expected. If achieving the expected level is termed "complete realization" and not achieving that level is "incomplete realization", it is easy to imagine in the case of a scalar structure that a "complete realization" not being achieved and the activity ending with an "incomplete realization". On the other hand, if the event does not have a scalar structure, there is only one result and it is difficult for a speaker to imagine both a "complete realization" and an "incomplete realization". As a result, we can probably say that when it is easy to get an interpretation of "X happened incompletely, but X did not happen completely", it is easy to accept result cancellation. Since "X happened completely" does not imply "X happened incompletely", no contradiction arises in negating "X happened completely". That a reading of incomplete realization is involved in the acceptability of result cancellation has not been pointed out in previous research.

There are certainly speakers of Japanese who, like Burmese speakers, upon hearing the sentences of (21) and (22), think of a situation in which the event does not happen at all. However, that such speakers are a minority is shown by the fact that in Miyajima's survey there were not many who judged the sentences "Natural". The preceding discussion can be summarized as follows: Since a result is realized, even though it may be an "incomplete realization", for many Japanese speakers, an accomplishment verb entails a result.

#### 4.4 Result defocusing by adverbial elements

As seen in Section 4.3, an "incomplete realization of the result" interpretation increases the acceptability of result cancellation in Japanese. However, there are times when Japanese speakers express a situation in which no result arises at all, just as in Burmese. These are cases in which adverbial elements appear modifying the verb.

According to the results of the survey in Miyajima (1985), (27), which includes the adverb *issyookanmei* 'as hard as (I) can', is more acceptable than (26), which does not. (26) was judged "Natural" by 11 people, "Somewhat unnatural but usable" by 22, and "Completely unnatural" by 66 people, but (27) was judged "Natural" by 31, "Somewhat unnatural but usable" by 36, and "Completely unnatural" by 33, showing an increase in the number of "Natural" and "Somewhat unnatural but usable" judgments.

- (26) *Kakinomi o otosi-ta keredo, oti-nakat-ta.*  
 persimmon ACC drop(vt)-PST although drop(vi)-NEG-PST  
 (I) dropped the persimmon, but (it) didn't drop.'

- (27) *Issyookenmei kakinomi o otosi-ta keredo oti-nakat-ta.*  
 very.hard persimmon ACC drop(vt)-PST although drop(vi)-NEG-PST  
 ‘(I) dropped the persimmon very hard, but (it) didn’t drop.’

Since it is difficult to think of the event expressed by *otiru* ‘fall’ as occurring incompletely, it is difficult to explain the improved acceptability of (27) from the point of view of incomplete realization of the result. Miyajima (1985) considers the cause to be placement by the adverb *issyookenmei* of focus on the action. I would also like to consider this to be the cause. Since *issyookenmei* is an adverb that semantically only modifies the activity portion, it places focus on the action. The result portion is probably defocused as a result. Other adverbial elements that cause defocusing of the result include, in addition to *issyookenmei* ‘as hard as (I) can’, *kossori* ‘stealthily’, *osoruosoru* ‘timidly’, *sinken ni* ‘earnestly’, *isoide* ‘quickly’, and *tikara o komete* ‘putting one’s strength into’.

However, the fact cannot be ignored that on Miyajima’s survey over 30% of those surveyed judged (27) to be “Completely unnatural”. Accordingly, as a factor increasing the acceptability of result cancellation, “defocusing of the result by an adverbial element” is weaker than “incomplete realization of the result”. In addition, the appearance of an element, the adverbial element, other than the verb is needed. “Defocusing of the result by an adverbial element” can, therefore, be considered a secondary factor. The primary factor increasing the acceptability of result cancellation should be considered to be “incomplete realization of the result”.

## 4.5 Validity of previous research

The arguments of Sections 4.3 and 4.4 indicated that it is necessary to recognize two factors that increase the acceptability of result cancellation in Japanese: (i) an incomplete result realization interpretation, and (ii) defocusing of the result by an adverbial element. Of these, (i) is the primary factor. The difference between English and Japanese pointed out in Ikegami (1981, 1985) can be reduced to the fact that in Japanese there are conditions like (i) and (ii) that increase the acceptability of result cancellation while there are no such conditions in English.

Let us consider here the validity of previous research concerning factors that make result cancellation possible in Japanese. Kageyama (1996) held that it is because in Japanese the vantage point was placed with BECOME in Lexical Conceptual Structure in contrast to English where it is placed with ACT ON that the acceptability of result cancellation is higher. However, this alone cannot explain the fact that acceptability varies depending on the verb. Tsujimura (2003) says that Japanese lexical causative verbs are underspecified for telicity. However, since, as described above, for many Japanese speakers accomplishment verbs entail a result, this explanation

is invalid. The metonymy explanation in Sato (2005: 99–113) and the focusing operation explanation of Ezure (2006) are related to the result defocusing described above, but these cannot explain the variability in acceptability depending on the verb found in the survey data from Miyajima (1985) and shown in the table in (25). Aoki and Nakatani (2013a, b) attempt to explain the phenomenon using the strength of the processing component. In other words, this is an attempt to explain the phenomenon by the strength of the activity portion of an accomplishment verb, but, as argued in Section 4.4, the question of the acceptability of result cancellation should rather be explained with attention to the result portion.

Most of previous research attempted to explain the acceptability of result cancellation in Japanese from a single point of view. However, (i) is a factor that bears on the semantics of the result portion and (ii) is a factor that reduces the prominence of the result itself, so it is probably impossible to combine these two into a single point of view.

## 5 Intended results

The results expressed by accomplishment verbs in Burmese can always be cancelled. It could perhaps be thought that Burmese simply lacks accomplishment verbs and that what appear to be accomplishment verbs are actually activity verbs. However, I believe that there are accomplishment verbs in Burmese. The first reason for this belief is that, if a sentence like (28) below is not followed by a sentence cancelling the result, the sentence is interpreted as meaning “he is dead”.

- (28) *t̃u=gò t̃aʔ=tê.*  
 3sg=KO kill=REAL  
 ‘(I) killed him.’

Secondly, if the existence of accomplishment verbs is not recognized, it becomes impossible to explain why (29) is completely acceptable but (30) is less so.

- (29) *t̃aʔ=phô t̃ănàyi c̃à=dê.*  
 kill=to one.hour last=REAL  
 ‘It took one hour to kill (him).’

- (30) *?pyé=bô t̃ănàyi c̃à=dê.*  
 run=to one.hour last=REAL  
 Literal translation: ‘It took one hour to run.’

The difference in acceptability between (29) and (30) can be attributed to the fact that *t̃aʔ* ‘kill’ is an accomplishment verb and *pyé* ‘run’ an activity verb. Therefore,



Burmese must be considered to have accomplishment verbs including a result part in their lexical semantic structure.

Then, how should the fact that Burmese accomplishment verbs allow result cancellation be explained? The author believes that the result of accomplishment verbs in Burmese should be included in the lexical semantic structure as “what is intended by the actor”. Since the result is completely something the actor intends and is something that is in the actor’s mind, it can be cancelled. The fact that, in the absence of a following cancellation clause, (28) is interpreted as meaning “he is dead” is probably a pragmatic interpretation. The reasons for considering this to be a pragmatic rather than semantic problem are described below.

In order to clearly show the result of a causative action in Burmese, sentences using the subordinate clause marker *=ʔaun* ‘until; so as to’ like the following are commonly used.

- (31) *t̃u=gò t̃è=ʔaun t̃aʔ=t̃è.*  
 3sg=KO die=until kill=REAL  
 Literal translation: ‘(I) killed him until (he) died.’  
 Free translation: ‘(I) killed him.’
- (32) *cā=ʔaun chā=d̃è.*  
 drop(vi)=until drop(vt)=REAL  
 Literal translation: ‘(I) dropped (it) until (it) dropped.’  
 Free translation: ‘(I) dropped (it).’
- (33) *pyeʔ=ʔaun phyēʔ=t̃è.*  
 break(vi)=until break(vt)=REAL  
 Literal translation: ‘(I) broke (it) so that (it) broke.’  
 Free translation: ‘(I) broke (it).’

These may appear somewhat odd. Taking (31) as an example, since the actor carries out an activity with the presumption of the result “(he) is dead’, it could be thought that there is no need to use a subordinate clause to express “until (he) died”. That is, the sentence appears to be a tautology. However, this expression is natural in Burmese.

What is important is that, if one cancels the results of (31) through (33), as in (34), the acceptability decreases.

- (34) *\*t̃u=gò t̃è=ʔaun t̃aʔ=t̃è. d̃ā=b̃è m̃ē m̃ā-t̃è=bú.*  
 3sg=KO die=until kill=REAL this=though NEG-die=NEG  
 Lit. ‘(I) killed him until (he) died. But (he) didn’t die.’

That is, the result is entailed with addition of the subordinate clause formed with *=ʔaun*. This fact is evidence that the subordinate clause is used to show that the

intended result is actually realized. Since Burmese accomplishment verbs do not entail their result, a subordinate clause formed with *=ʔaun* is used when the speaker wishes to clearly state that the result occurred. If Burmese accomplishment verbs semantically entailed their results, a construction like this would probably not be necessary.

Tai (1984: 291) points out that, in a resultative expression in Chinese like *shā-sǐ* (kill-die) ‘kill’, the resultative complement (*sǐ* ‘die’ in this example) has the function of showing that the result was realized. Burmese does not have serial verb constructions with a causative meaning like *shā-sǐ* formed on the pattern “transitive verb + intransitive verb”. This is due to the fact that, as pointed out in Sawada (1988), the verbs in a serial verb construction in Burmese must share a common subject argument. An example like the following is therefore ungrammatical (See Vittrant 2006 regarding general characteristics of Burmese serial verb constructions).

- (35) \**tû=gò    ʔaʔ    ʔè=dê.*  
       3sg=KO    kill    die=REAL  
       Intended meaning: ‘(I) killed him.’

In the sense that they entail the result, the subordinate clauses formed with *=ʔaun* in (31) through (33) can be said to have the same kind of function as resultative complements in Chinese. Although they use different means, both languages have constructions to clearly show the realization of results.

Recall here the proposal in Tsujimura (2003) for Japanese. Tsujimura proposed that lexical causative verbs in Japanese are underspecified for telicity and that a telic interpretation results from conversational implicature. This explanation can be thought to apply, not to Japanese, but to Burmese. As argued in Section 4.3, since many Japanese speakers find accomplishment verbs to entail results, it is difficult to consider them to be underspecified for telicity.

## 6 Conclusion

Burmese is a language in which the cancellation of accomplishment verb results is completely acceptable. It is safe to say that there are no speakers who do not allow result cancellation. On the other hand, there are many speakers of Japanese who do not allow result cancellation in Japanese and Japanese and Burmese differ greatly on this point.

Since the result of an accomplishment verb is not entailed in Burmese, cancellation is allowed. The reason that results are not entailed in Burmese is that the results expressed by the verb are ones that are intended by the actor. I would like to leave the problem of how the intended result of an accomplishment verb in Burmese

should be represented in semantic structure for researchers working in the various linguistic theories. In Japanese, on the other hand, the results of accomplishment verbs should basically be considered to be entailed. For precisely this reason, quite a few speakers do not allow cancellation of results. However, acceptability of cancellation does increase under the influence of some factors. The two factors are: (i) an interpretation of incomplete realization of the result, and (ii) defocusing of the result by adverbial elements. Of these, (i) is the primary factor. The results of accomplishment verbs are entailed in English as in Japanese, but English lacks conditions like (i) and (ii).

Finally, I would like to mention other languages. The phenomenon of result cancellation discussed above has been reported in such languages as Chinese (Tai 1984), Hindi (Singh 1991), Tamil (Talmy 1991), and Mon (Jenny 2005), in addition to Burmese and Japanese. According to the observations in Kato (1996), result cancellation is also possible in Pwo Karen, a language neighboring Burmese, as shown in (36)

- (36) *jə mà θi ʔəwê. lānānθi θi ʔé.*  
 1sg CAUS die 3sg but die not  
 'I killed him. But he didn't die.'

According to Phan Thi My Loan (p.c.), result cancellation is also possible in Vietnamese, as shown in (37).

- (37) *Tôi đã giết nó. Nhưng nó chưa chết.*  
 1sg PST kill 3sg but 3sg not.yet die  
 'I killed him. But he hasn't died.'

On the other hand, according to Marasri Miyamoto (p.c.), Thai does not allow result cancellation, as shown below.

- (38) *\*phǒm khāa khǎw. tɛɛ khǎw mây taay.*  
 1sg kill 3sg but 3sg not die  
 Intended meaning: 'I killed him. But he didn't die.'

However, Thepkanjana and Uehara (2009: 605; 2010: 299) point out that result cancellation is possible in Thai in a serial verb construction, as shown below.<sup>4</sup>

- (39) *tamrùat khāa phûuráy mây taay.*  
 police kill criminal not die  
 'The police tried to kill the criminal but he/she was not dead.'

<sup>4</sup> Marasri Miyamoto (p.c.) reports finding this sentence of low acceptability. There appears to be some individual variation in acceptability judgments.

The phenomenon of result cancellation with accomplishment verbs appears to be widely distributed among the languages of East Asia, Southeast Asia, and South Asia. I would like to suggest, therefore, that this may be an areal feature. However, as indicated in this chapter, the actual situation expressed by result cancellation may vary depending on the language. I would like to emphasize, then, that it is not simply whether or not this phenomenon exists, but attention must also be paid to semantic differences.

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## Additional abbreviations

KA – case particle =*kâ*/=*gâ* ‘agent (subject)/source’; KO – case particle =*kô*/=*gô* ‘patient/theme/recipient/goal’; LO – subordinate clause marker =*lô*; PI – particle =*pî*/=*bî* indicating a perfect-like meaning; PN – personal name; vi – intransitive verb; vt – transitive verb; 1sg – first person singular; 3sg – third person singular

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## 6 Resultative constructions in Japanese from a typological perspective

### 1 Introduction

This chapter deals with a particular type of sentence structure called the “resultative construction”, which is illustrated here using English examples. The two sentences in (1) each consist of a subject, a (transitive) verb, and an object, followed by a “resultative predicate”, marked in boldface, that expresses the object’s final state resulting directly from the act denoted by the main verb.

- (1) a. *The burglar shattered the windshield **into pieces**.*  
b. *The burglar knocked the man **senseless**.*

Sentence (1a) means that the windshield was in pieces as a result of the burglar’s shattering it, and (1b) that the man was senseless as a result of the burglar’s knocking him (down). Corresponding to (1a), an intransitive variant is also available as in *The windshield shattered into pieces*. Because of their multifaceted nature involving the lexicon, syntax, semantics, and even pragmatics, resultative constructions in English have been investigated intensively in both formal approaches (generative grammar, formal semantics) and cognitive approaches (construction grammar, usage-based grammar), with lexical semantics serving as a window linking the two camps (e.g. Simpson 1983; Goldberg 1995; Levin and Rappaport Hovav 1995; Rappaport Hovav and Levin 2001; Boas 2003; Randall 2010, among many others).

Apart from English, Japanese resultative constructions have also attracted considerable attention from domestic researchers engaged in comparison of English, Japanese, and other languages from a typological point of view (Kageyama 1996; Washio 1997; papers in Ono 2007 and 2009). This chapter aims to elucidate the nature of resultative constructions by placing Japanese at the center of crosslinguistic comparison. The vital issue is how and why different languages permit different ranges of resultative constructions. The word-for-word translation of the English sentences in (1) into Japanese, for example, immediately reveals a discrepancy in grammaticality between (2a), which is impeccable on a par with (1a), and (2b), which unlike (1b) sounds totally unacceptable.

- (2) a. *Gootoo wa huronto-garasu o **konagona ni** wat-ta.*  
burglar TOP front-glass ACC pieces COP shatter-PST  
‘The burglar shattered the windshield into pieces.’

- b. \**Gootoo wa otoko o hurahura ni nagut-ta.*  
 burglar TOP man ACC giddy COP knock-PST  
 ‘The burglar knocked the man senseless.’

Exploration of the universality and language-particularity of resultative constructions would not be complete without examining Chinese. As illustrated by (3), Chinese resultative constructions are realized by morphological compound verbs consisting of two verbs (V1-V2), with V1 representing a causing event and V2 a change of state.

- (3) a. *Daozei za-sui-le dangfengboli.*  
 burglar shatter-broken-PERF windshield  
 ‘The burglar shattered the windshield into pieces.’
- b. *Daozei da-yun-le nei-ge ren.*  
 burglar knock-senseless-PERF that-CLF person  
 ‘The burglar knocked the man senseless.’
- c. *Meng Jiangnü ku-dao-le Changcheng.*  
 Meng Jiangnü cry-fall-PERF Great.Wall  
 (Lit. ‘Meng Jiangnü cried the Great Wall down.’)  
 ‘The Great Wall has fallen down as a result of Meng Jiangnü’ crying.’

The Chinese sentences in (3a) and (3b) are perfectly well-formed, conveying the same meanings as the English sentences in (1a) and (1b). In addition, example (3c) is acceptable in Chinese, although its literal translation into English or Japanese would sound outlandish. Even this brief comparison of three languages is sufficient to indicate that the spectrum of acceptable resultatives varies in individual languages. Of the languages mentioned, Japanese is most restricted, while Chinese is most liberal, and English appears to come in between. In the literature, although the relevant constructions in individual languages have been examined in great depth, the question remains unanswered whether such crosslinguistic differences are simply due to the idiosyncrasies of individual languages or follow systematically from certain universal principles. This chapter attempts to pinpoint the semantic factors that are considered responsible for such crosslinguistic variation in the acceptability of resultative constructions.

The rest of this chapter is organized as follows. Section 2 will first define the scope of resultative constructions by delineating their syntactic and semantic properties. Section 3 develops a set of criteria for classifying resultative constructions in diverse languages on the basis of the semantic relations between main verbs and resultative predicates and elucidates the nature of Japanese resultative constructions. Section 4 will examine resultative compound verbs in Chinese and argue that they are derived from a syntactic structure that is similar to English resultative constructions. Section 5 will conclude the chapter.



## 2 Delimitation of resultative constructions

Before probing the variation in resultative constructions across languages, this section will establish the syntactic and semantic criteria that are necessary to identify and typologize them.

### 2.1 Syntactic and semantic criteria for resultative predicates

The resultative constructions addressed in this chapter are characterized by the combination of syntactic and semantic properties shown in (4), where a particular syntactic structure is paired with a specific semantic interpretation associated with it.

(4) Characterizations of resultative constructions

- a. Syntactic structure: [Subject] [verb] [object] [resultative predicate]
- b. Semantic interpretation: The resultative predicate is interpreted as designating the final state of the object (Theme) that emerges as a direct consequence of the action/event represented by the main verb.

NB: (i) Word order is subject to parametric variation.  
 (ii) If the verb is intransitive, the resultative phrase designates the resultant state of the subject, which functions as a Theme.

Essential to the syntactic structure in (4a) is the manifestation of a “resultative predicate” (or “resultative” for short) as an independent syntactic constituent of a simplex clause predicated by the main verb. This requirement is satisfied in the English examples in (1), where *into pieces* and *senseless* qualify as resultative predicates meeting the semantic condition in (4b).

Given that a resultative construction is defined by the combination of the two conditions in (4a) and (4b), sentences that fail to meet them simultaneously do not count as resultative constructions. For example, a complex sentence like *The burglar knocked the man until he became senseless* is not identified as a resultative construction because the resultant state is expressed by a subordinate clause with *until*. The two conditions in (4) also exclude sentences involving so-called “depictive predicates” (Rapoport 1993), as exemplified by *drunk* and *hebereke de* ‘in a drunken stupor’ in (5).

(5) a. *He drove the car drunk.*

- b. *Kare wa hebereke de kuruma o unten-si-ta.*  
     he TOP stupor COP car ACC drive-do-PST

Also excluded by the proposed criteria are other types of constructions sometimes also referred to as resultative constructions, such as the Japanese *-te aru* construction, where the perfective auxiliary verb *aru* (originally meaning ‘exist’) denotes a

resultant state of an object, and the perfective constructions in Russian linguistics (Nedjalkov 1988), where verbal suffixes and other bound morphemes express change of state.

In addition to the paired conditions in (4), it is crucially important to demarcate the range of morphological realizations of resultatives to implement a crosslinguistic comparison. In the literature on English resultative constructions, PPs like *into pieces* in (1a), APs like *senseless* in (1b), particles like *down* in *The burglar knocked him down*, and NPs like *a pale shade of yellow* in *I painted the car a pale shade of yellow* (Simpson 1983) have been assumed to constitute resultative predicates. Not all languages employ all of these categories as resultative phrases. Romance languages, for example, allow only an extremely limited range of AP resultatives, a fact that leads Green (1973) to conclude that these languages lack resultative constructions. As Napoli (1994) points out, however, resultatives that take the form of PPs are actually common even in Romance languages. More discussion on the forms of resultatives in different languages is found in Saiki and Washio (2009).

As shown in Table 1, Japanese resultative predicates are realized by four categories: adjective, AN (adjectival noun), mimetic, and noun.

**Table 1:** Types of resultative phrases in Japanese

Lexical categories	Examples
Adjectives (adjectival stem with adverbial ending <i>ku</i> )	<i>kaminoke o aka-ku someru</i> ‘dye one’s hair red’
Adjectival Nouns + <i>ni</i>	<i>harigane o massugu ni nobasu</i> ‘stretch a wire straight’
Mimetics + <i>ni</i>	<i>nodo ga karakara ni kawaku</i> ‘one’s throat becomes dry’
Nouns + <i>ni</i>	<i>ita o mapputatu ni waru</i> ‘chop a wooden board into halves’

Adjectival resultatives like *aka-ku* ‘red’ are inflected in the *ren’yō* (adverbial), whereas the resultatives of ANs, mimetics, and nouns are signaled by *ni*, whose categorial status is controversial in Japanese grammar. Some researchers regard it as a dative particle or an inflectional ending (in the case of ANs), while others identify it with the *ren’yō* form (Okutsu 1978; Takezawa 2016) or infinitive (Bloch 1946) of the copula *da*. The latter analysis appears more plausible in view of the fact that *X ni* in resultative constructions corresponds perfectly to *X da* in concluding a sentence. The copula status of *ni* may be a contributory factor in sanctioning a relatively high flexibility of lexical items in the AN, mimetic, and N categories as compared with native adjectives, which are limited in number.

## 2.2 Phrases that look like resultatives

In the literature on English and Japanese resultative constructions, examples are sometimes brought in whose status as resultative predicates is dubious. This subsection will clarify the differences between genuine resultatives and adverbials that

look like resultatives but do not qualify as resultatives in light of the syntactic and semantic criteria in (4). The adjectives *thick* and *tight* in (6), for example, are not identified as resultatives because they do not denote the resultant states emerging from spreading the butter or braiding the hair.

- (6) a. *He spread the butter **thick**.* (Washio 1997)  
 b. *Janet braided her hair **tight**.* (Levinson 2010)

In fact, such adjectives, called “spurious resultatives” by Washio (1997) and “pseudo-resultatives” by Levinson (2010), can be paraphrased by using *-ly* adverbs like *thickly* and *tightly* that represent manners of actions. Geuder (2000) treats adverbs like *elegantly* in *She dressed elegantly* under the category “adverbial resultative”, but *-ly* adverbs do not count as true resultatives.

In traditional Japanese grammar, resultative predicates are not given a special status but are included in the broad category of adverbs/adverbials. In Nitta (2002), where Japanese adverbs are classified into adverbs of result, adverbs of manner, adverbs of degree and amount, adverbs of time, and adverbs of frequency, what we identify as resultatives are discussed under the general category of adverbs of result that contains sundry adverbs including spurious or pseudo resultatives without proper discrimination. Some examples of true resultatives are selected below from Nitta (2002).

- (7) **garigari** [skin and bones] **ni yaseru** [lose weight], **ameiro** [yellowish-brown] **ni nigoru** [become murky], **gudenguden** [blotto] **ni you** [get drunk], **katinkatin** [rock hard] **ni kooru** [freeze (vi)], **karakara** [parched dry] **ni kansoo-suru** [dry (vi)], **konagona** [smithereens] **ni kowareru** [break (vi)], **tiisa-ku** [small-ADV] **tigiru** [tear (vt)], **hutatu** [two] **ni hakisaku** [rip (vt)]

When combined with the verbs given in the parentheses, the expressions in (7) are interpreted as representing the final states of the actions or events denoted by the verbs, in conformity with the semantic condition in (4b). These resultative predicates should be contrasted with manner adverbs as in (8a) and degree adverbs as in (8b).

- (8) a. *Titi wa **kanasigeni** hanasi-ta.*  
 father TOP sadly speak-PST  
 ‘Father spoke sadly.’  
 b. *Kyoo wa **mooretuni** atui.*  
 today TOP awfully hot  
 ‘It’s awfully hot today.’

As in English, spurious or pseudo resultatives should not be confused with true resultatives in Japanese. Consider the examples in (9).

- (9) a. *Gohan ga hukkura to take-ta.* (Kageyama 1996)  
 rice NOM fluffy QUOT cook-PST  
 ‘The rice cooked up fluffy.’
- b. *Kuti o ooki-ku hirai-ta.* (Nitta 2002)  
 mouth ACC big-ADV open-PST  
 ‘(He) opened his mouth wide.’
- c. *Zyaketto o kakkoyo-ku ki-ru.* (Miyakoshi 2002)  
 jacket ACC elegant-ADV wear-PRS  
 ‘Wear a jacket elegantly.’

In (9a), *hukkura to* ‘fluffy’ consists of a mimetic word *hukkura* ‘soft, fluffy’ followed by the quotative particle *to*. Since this particle regularly participates in the formation of manner adverbials as in *kippari to kotowaru* ‘refuse flatly’, the boldfaced phrase in (9a) should also be regarded as a pseudo-resultative or more specifically what Kageyama (1996) called “*Kekka-yōtai no fukushi*” (adverbs of result posture), which represent how the state of a Theme looks/feels after change. The adjective *ooki-ku* in (9b) is another example of pseudo-resultative, as it does not mean that his mouth became big after he opened it, but only expresses how widely he opened his mouth. An adverbial interpretation is even more conspicuous with (9c), where *kakkoyo-ku* behaves exactly like *elegantly* in *She dressed elegantly*.

Another class of phrases that deserves comment has to do with English prepositional phrases like *across the room* and *out of Bethlehem* in (10).

- (10) a. *John danced mazurkas **across the room**.* (Verspoor 1997)  
 b. *The wise men followed the star **out of Bethlehem**.* (Wechsler 1997)

Elaborating on English resultative constructions, Verspoor (1997), Wechsler (1997), Rappaport Hovav and Levin (2001), Boas (2003), Goldberg and Jackendoff (2004), and other researchers contend that constructions like (10), which apparently denote physical locomotion, should be subsumed under the broad rubric of “resultative family”. According to these authors, the boldfaced PPs in (10) are identified with resultative predicates. This assumption has the non-trivial implication of nullifying the validity of the long-respected “Direct Object Restriction” (Simpson 1983; Levin and Rappaport Hovav 1995), which holds that resultative phrases universally are predicated of direct objects (including unaccusative subjects under the Unaccusativity Hypothesis). This is so because *across the room* and *out of Bethlehem* in (10) are predicated not of the objects *mazurkas* and *the star* but of the agentive subjects *John* and *the wise men*.

Researchers like Kageyama (2004), Rothstein (2004), and Mateu (2005) question the feasibility of the claim and argue that sentences like (10) representing physical movement of agents should be kept separate from true resultative constructions. For example, sentences like those in (10) are compatible with the adverbial *all the way*, which emphasizes gradual movement along a path, as in *John danced mazurkas all the way across the hall*. The same adverb, however, is at odds with true resultative constructions like (11), which zoom in on the endpoint of change, leaving out intermediate stages.

- (11) *She sang the baby (\*all the way) to sleep.*

For Japanese, an analogous case is raised by Miyakoshi (2006), who claims that *harahatibu* ‘(eating) 80% full’ in (12) is a resultative phrase.

- (12) *Baransu no yoi syokuzi o harahatibu taberu.*  
 balance GEN good meal ACC 80%.full eat.PRS  
 ‘I eat a well-balanced meal (until I am) 80% full.’

Such a claim is immediately rejected because *harahatibu*, which may be accompanied by *made* ‘up to’, as in *harahatibu made* ‘up to 80% full’, is unequivocally an adverb of degree. In point of fact, true resultatives cannot take *made* ‘up to’, as shown by the ungrammaticality of *\*Kabin ga konagona made kowareta* lit. ‘The vase broke all the way into smithereens’.

## 2.3 Verbs as resultative predicates

In contrast to PPs, APs, and NPs, verbs can function as resultatives in some languages including Thai (13a) and Chinese (13b).

- (13) a. *Khaw sak sua sa?aat.* [Thai]  
 he wash shirt be.clean  
 ‘He washed his shirt clean.’ (Thepkanjana and Uehara 2009)
- b. *Zhangsan ku-shi-le shoupa.* [Chinese]  
 Zhangsan cry-wet-PERF handkerchief  
 ‘Zhangsan cried the handkerchief wet.’ (Huang 2006)

The Thai sentence in (13a) takes a serial verb construction in the form of “Subject + V1 + Object + V2”, where V1 and V2 are separated by an object phrase. According to Thepkanjana and Uehara (2009), the second verb *sa?aat* ‘be clean’ serves as a resultative predicate. Similar serial verb constructions are reported in languages of West Africa such as Edo. In the Chinese example (13b), by contrast, the resultative

predicate *shi* ‘be wet’ is realized as the second verb of a V-V compound verb *ku-shi*. Both Thai and Chinese constructions conform to the two conditions delineated in (4). In Section 4, it will be argued that V1 *ku* ‘cry’ and V2 *shi* ‘be wet’ were separate constituents in Ancient Chinese and got fused together at a later period.

The question that must be raised at this juncture concerns the status of Japanese V-V compounds like *tataki-kowasu* [knock-shatter (vt)] ‘knock to pieces’. Can they be legitimately identified with resultative constructions in the same way that Chinese resultative compound verbs are? Kageyama (1996) hints at the possibility of exploring this direction of analysis, and subsequent researchers working in the minimalist syntax framework, such as Hasegawa (2001), Saito (2014), and Aoyagi and Zhang (2014), adduced their own arguments for syntactic treatments. Instead of scrutinizing their syntactic arguments individually, one crucial difference between Chinese and Japanese is pointed out here that leads us to conclude that Japanese compound verbs do not count as resultative constructions. Compare the Chinese compound verb in (14a) with the Japanese counterpart in (14b).

- (14) a. *Wusong da-si-le yi-zhi laohu.*  
           Wusong hit(vt)-die(vi)-PERF one-CLF tiger  
           ‘Wusong shot a tiger dead.’
- b. *Otoko wa tora o uti-korosi-ta.*  
           man TOP tiger ACC hit(vt)-kill(vt)-PST  
           ‘The man shot the tiger dead.’
- c. \**Otoko wa tora o uti-sin-da.*  
           man TOP tiger ACC hit(vt)-die(vi)-PST  
           Lit. ‘The man shot the tiger and he himself died.’

The two examples differ crucially in the transitivity of the second verbs. While the Chinese resultative compound in (14a) consists of a transitive *da* ‘hit’ and an intransitive (unaccusative) *si* ‘die’, the Japanese counterpart in (14b) is composed of two transitive verbs, *utu* ‘hit’ in V1 and *korosu* ‘kill’ in V2. Replacing the second verb with the intransitive verb *sinu* ‘die’ would render the sentence ungrammatical, as shown by (14c). The transitive-transitive pairing as in (14b) is a pervasive pattern of Japanese lexical compound verbs that is formalized as the Transitivity Harmony Principle (Kageyama 1993). The principle stipulates that a verb that has an external argument must be compounded with another verb that also has an external argument – a cognitive condition on agent-sharing in event integration in the lexicon (Kageyama 2016). Since the head verb *korosu* ‘kill’ in (14b) is itself a causative verb entailing change of state, there is no independent constituent that functions as a resultative predicate separately from this head verb. Japanese compound verbs like this meet neither the syntactic nor the semantic criterion in (4) and hence should be excluded from the repertoire of resultative constructions.

### 3 Toward a typology of resultative constructions

Having elucidated the core properties of resultative constructions, we are now in a position to attempt a typology of resultative constructions, or more precisely a typology of resultative predicates. There is a huge body of literature on English resultative constructions that have been carried out in roughly three different theoretical approaches – (i) a lexical-semantic approach based on the meaning of main verbs (e.g. Carrier and Randall 1992; Kageyama 1996; Washio 1997; Dimitrova-Vulchanova 2003); (ii) an event semantics approach based on the temporal relation between causing and caused events (e.g. Krifka 1998; Rothstein 2004; Rappaport Hovav and Levin 2001; Wechsler 2005), and (iii) a usage-based approach based on conventionalization and idiomatization (e.g. Verspoor 1997; Boas 2003; Goldberg and Jackendoff 2004). Most of them, however, are devoted to the particularities of English, with little attention paid to typological differences across genetically different languages. This section proposes a typological classification of resultative predicates on the basis of the lexical semantics of main verbs. It should be stressed that Japanese data provide the semantic underpinnings for the formulation of the proposed typology.

#### 3.1 Verb meaning and resultative phrases

Since Simpson (1983), it has been customary in studies on English resultative constructions to classify them in terms of the transitivity of main verbs, as summarized in Table 2.

**Table 2:** English resultative constructions classified by the transitivity of main verbs

Transitivity of verbs	English examples	Acceptability of Japanese counterparts
A. Transitive causative	She froze the meat <b>solid</b> .	OK <i>Kanozyo wa niku o katikati ni koorase-ta.</i>
B. Transitive non-causative	He scrubbed the floor <b>shiny clean</b> .	* <i>Kanozyo wa yuka o pikapika ni kosut-ta.</i>
C. Intransitive (unaccusative)	The meat froze <b>solid</b> .	OK <i>Niku wa katikati ni koot-ta.</i>
D. Intransitive (unergative)	She shouted herself <b>hoarse</b> .	* <i>Kanozyo wa nodo o karakara ni saken-da.</i>

Whereas English permits all four types of resultative constructions shown in Table 2, though with varying degrees of acceptability and productivity as discussed later on, Japanese clearly discriminates the acceptable resultatives in A and C from the unacceptable ones in B and D, and the disparity obviously originates from the semantics

of the main verbs, and not from the verb's transitivity. The verbs in A and C entail a change of state by themselves, whereas those in B and D denote only durative activities without explicitly entailing the attainment of a state as a result of the change.

Based on a similar observation, Kageyama (1996) was the first to point out that the resultative predicates in Japanese are available only with change of state verbs, regardless of their transitivity, and proposed to attribute the core meaning of Japanese resultatives to the lexical semantic representation (Lexical Conceptual Structure: LCS) of main verbs. The verb *kooraseru* 'freeze' (vt), for example, roughly means that an agent (*x*) causes a liquid object (*y*) to change to the solid state of ice. This meaning is represented in the schematic LCS in (15).

- (15) LCS of transitive *kooraseru* ‘freeze’:  
 [ x ] CAUSE [ [y: LIQUID] BECOME [ y BE AT-[SOLID]] BY LOSS OF HEAT  
 ↓  
 Realization of a resultative: *katikati ni*

In this semantic structure, the result component AT-[SOLID], specified with a particular semantic constant 'SOLID', is the key to understanding the nature of the resultatives that may occur with *kooraseru* 'freeze'. The typical resultative that occurs with this verb is *katikati ni* 'solid' (or its variants like *katinkatin ni* or *katikoti ni*), where the mimetic word *katikati*, representing the solid quality of ice, corresponds to the semantic constant SOLID and the copula *ni* to the semantic predicate AT. Generalizing such an observation, Kageyama (1996) contends that Japanese resultative predicates are lexical specifications of the semantic constant given in the result component of the main verb's LCS. Since resultatives of this kind refer to a particular semantic element inherent in the LCS of a given verb, Kageyama (1996) terms them "inherent resultatives". The correspondence between the result component (AT-*z*) of a verb's LCS and the inherent resultative predicate that realizes the semantic constant in *z* is observed pervasively across change of state verbs in Japanese, as illustrated in (16).

- (16) a. *nuru* ‘paint’ >> some color (*kabe o X-iro ni nuru* ‘to paint the wall X color’)  
 b. *kiru* ‘cut’/ *kireru* ‘be cut’ >> in two or more parts (*tamanegi o mizin ni kiru* ‘to chop an onion into small pieces’)  
 c. *migaku* ‘polish’ >> clean (*kutu o pikapika ni migaku* ‘to polish the shoes shiny clean’)

The nature of inherent resultatives as a concrete manifestation of a semantic concept echoes an even more general phenomenon exemplified by (17).

- (17) a. *He shelved the books on the top shelf.* (Hale and Keyser 1994)



- b. *Titi ga daigaku-byooiin ni nyuu-in-si-ta.*  
 father NOM university-hospital LOC enter-hospital-do-PST  
 Lit. 'Father was hospitalized in a university hospital.'

The assumption that Japanese resultatives are concrete specifications of semantic constants in a verb's LCS correctly rules out improper combinations of a verb and a resultative like those in (18) as semantically incongruent.

- (18) a. \*Mizuumi ga konagona ni koot-ta. lit. 'The lake froze to pieces.'  
 b. \*Kagami o mapputatu ni migai-ta. lit. 'I polished the mirror into halves.'  
 c. \*Tamanegi o katikati ni kit-ta. lit. 'I sliced an onion into a solid state.'

Semantic incongruence of the same kind is also exhibited by the unacceptability of (19) as contrasted with the acceptability of (17b).

- (19) \**Titi ga hyakkaten ni nyuu-in-si-ta.*  
 father NOM department.store LOC enter-hospital-do-PST  
 Lit. 'Father was hospitalized in a department store.'

In stark contrast to change of state verbs, activity verbs like *kosuru* 'scrub', *naguru* 'strike, beat', *sakebu* 'shout', and *naku* 'cry' (cf. B and D in Table 2) denote temporally non-delimited activities that do not have a particular endpoint. Kageyama (1996) represents the LCS schema of intransitive activity verbs as [x ACT] and that of transitive activity verbs as [x ACT ON-y], where ACT is a semantic predicate standing for a durative activity. In the absence of a semantic constant representing a resultant state, these Japanese verbs are naturally prohibited from taking a resultative phrase, as shown in (20).

- (20) LCS of transitive *naguru* ‘strike’:  
 [ x ] ACT ON-[ y ] NO RESULT COMPONENT  
 Realization of a resultative: ×  
 Bad example in (2b): \**Gootoo wa otoko o hurahura ni nagut-ta.*  
 ‘The burglar knocked the man senseless.’

In this respect, English and Chinese are peculiar in permitting activity verbs such as *scrub*, *strike*, and *cry* as well as change of state verbs such as *break* and *polish* to take resultative predicates.

Given the lexical nature of inherent resultative predicates, English resultative constructions involving non-change of state verbs are not lexical specifications but

are regarded as being derived in syntax. Under Kageyama's (1996) analysis, then, two kinds of resultative are distinguished: "inherent" and "derived".

(21) Two types of resultatives

- a. Inherent resultatives are licensed by semantic constants involved in the lexical semantic representations of change of state verbs. Available in both English and Japanese.

E.g. *break into pieces, freeze solid, paint X white, polish X shiny clean*

- b. Derived resultatives are licensed by syntactic mechanisms. Available in English, but not in Japanese.

E.g. *strike X senseless, scrub X clean, shout oneself hoarse*

Written in Japanese, Kageyama's (1996) monograph is hardly known outside Japan but has influenced to a considerable degree domestic researchers working on a variety of languages. Similar dichotomies of resultative predicates have since been proposed (independently) by other researchers including Washio's (1997) "weak resultatives" vs. "strong resultatives", Dimitrova-Vulchanova's (2003) "connected resultatives" vs. "disconnected resultatives", and Thepkanjana and Uehara's (2009) "entailed results" vs. "implied results". In these taxonomies, the former members largely correspond to Kageyama's inherent resultatives, and the latter members to his derived resultatives, although the correspondences may not be perfect.

Here it will be instructive to consider the nature of pseudo-resultatives mentioned in Section 2.2. Of particular interest are examples like those in (22), where the main verbs take locative phrases in addition to pseudo-resultatives.

- (22) a. *Utuiwa ni negi o taira ni narabe-te kudasai.*  
 container LOC onions ACC flat COP line.up-GER please  
 'Please line the onions up flat in the container.' (Kageyama 1996)
- b. *Otoko.no.hito ga dooro ni utubuse ni taore-te i-ru.*  
 man NOM road LOC face.down COP fall-GER be-PRS  
 'The man had fallen face down in the road.' (adapted from Nitta 2002)
- c. *Itiroo wa teeburu ni koppu o sakasama ni oi-ta.*  
 Ichirō TOP table LOC glasses ACC upside.down COP set-PST  
 'Ichiro put the glasses on the table upside down.' (Miyakoshi 2009)

Such examples are theoretically intriguing because the simultaneous occurrence of a locative phrase and a phrase that looks like a resultative apparently runs counter to Goldbeg's (1995) "Unique Path Constraint" in (23), which prohibits a single resultative sentence from referring to two or more distinct paths at the same time.

## (23) The Unique Path Constraint (Goldberg 1995)

If an argument *X* refers to a physical object, then more than one distinct path cannot be predicated of *X* within a single clause. The notion of a single path entails two things:

- i) *X* cannot be predicated to move to two distinct locations at any given time *t*.
- ii) The motion must trace a path within a single landscape.

The notion “path” in (23) comprises the processes of both physical locomotion and abstract change of state. This constraint correctly rules out sentences like \**Sam tickled Chris silly off her chair* as a combination of the motion path *off her chair* and the change path *silly*.

Seen in this light, the Japanese examples in (22) would contradict the Unique Path Constraint if the boldfaced phrases were viewed as true resultatives. Note that an analogous phenomenon is observed in English as well, as exemplified by *He spread his hand flat on the table* (Kageyama 1996). Such Japanese and English sentences are irrelevant to Goldberg’s constraint for the following reason. The Japanese verbs used in (22), i.e. *naraberu* ‘place two or more things at a place’, *taoreru* ‘fall on a place’, and *oku* ‘place on top of something’, as well as the verb *spread* in the English example above, are all verbs of change of location, whose eventualities are delimited by the arrival of a moving object at the designated location. Thus, the sentences predicated by these verbs would not be complete without a location/goal phrase, whereas they never entail the resultant state or posture of the object at the goal position. The situation will be schematically represented as in (24), using a simplified LCS.

- (24) *spread/naraberu*: [x ACT ON y] CAUSE [BECOME [y BE AT-<sub>[PLACE z]</sub> ]]
- |
- flat / taira ni*

The pseudo-resultative *taira ni* in (22a) or *flat* in *He spread his hand flat on the table* is merely an adverbial depiction of the state or posture of the Theme entity (*y*) after it is placed at a certain location. Besides the LCS analysis, Iwata (2009) proposes an analysis based on his own classification of result expressions, and Mihara (2009) an analysis using scalar structure of events to account for the seemingly problematic occurrence of two resultative(-like) phrases.

### 3.2 Implicational hierarchy of resultative predicates

The discussion in previous sections has brought to light that there are at least two distinct classes of resultative predicates: inherent resultatives, which are lexically licensed by the semantic constant specified in the result component of a verb’s LCS

representation, and derived resultatives, which are not attributed to the verb's LCS. This dichotomy serves as a basis for formulating a fine-grained typology of resultatives. Theoretically, four language types can be distinguished, depending on the availability of one or both of inherent and derived resultatives, as shown in Table 3.

**Table 3:** Crosslinguistic distribution of two types of resultatives

language sample	inherent resultatives	derived resultatives
A. Greek (?)	No	No
B. Japanese	Yes	No
C. English, Chinese	Yes	Yes
D. none (?)	No	Yes

The languages of Group A have neither of the two types of resultatives. Greek might be mentioned as a possible candidate here (though, strictly speaking, as it has two verbs, *kovo* 'cut' and *vafo* 'paint', that can take resultatives: Horrocks and Stavrou 2003). Group B includes Japanese, and Group C English and Chinese. Notably, Group D appears not to be instantiated. Assuming that the non-existence of the last group is not accidental, we can postulate an implicational universal along the following lines: If a given language possesses derived resultatives, it necessarily has inherent resultatives as well, but not vice versa. This suggestion is supported by the fact that English was not equipped with derived resultatives at early stages of its development, though inherent resultatives have been available throughout its history. This suggestion, according to Kageyama (2009), is corroborated by attested examples of early English reported in Visser (1963: 582ff.).

- (25) a. Old and Middle English  
       'wash clean', 'chop small', 'dye green/blue', 'paint black', 'grind small',  
       'shave clean/smooth', 'sweep clean', 'strip naked', 'poulder (=powder)  
       small'
- b. Early Modern English  
       *To vomitte or sleape away his drunkennesse.* (OED: 1565 Cooper Thesaurus)  
       *And cry my selfe awake?* (Visser 1963: 1611 Shakespeare, CYmb.)  
       *We therefore shouted the landlord out of bed.* (OED: 1797 T. Wright.)

As shown by (25a), inherent resultatives have been available since the Old and Middle English periods, whereas derived resultatives like *sleep his drunkenness away*, *cry oneself awake*, and *shout the landlord out of bed*, can be traced back to Early Modern English, but not earlier, as shown by (25b). This suggests that inherent resultatives are more rudimentary than derived resultatives in the development of a language. The suggestion is reinforced by the corpus data and by native intuition of

Present-day English. Boas (2003) thus reports that examples of what we call inherent resultatives are far more frequent than examples of what we call derived resultatives in his corpus search. Native speakers of English who use examples of inherent resultatives by themselves may not use many of the rare examples of derived resultatives coined by linguists, although they might be able to surmise the intended meanings.

Given that the two types of resultatives have a hierarchical relation, a question now arises as to whether the hierarchy is confined to the two parameters of inherent vs. derived or whether it can be extended to additional parameters in a more fine-grained typology. So far, this intriguing question has not been seriously addressed in the literature, except for Kageyama's (2009) preliminary study that suggests the classification in Table 4 on the basis of a small number of language samples.

**Table 4:** Typology of resultative phrases based on the inferrability from the main verb's lexical meaning

I. Inherent resultatives	<p>(A) <i>freeze solid</i> type: The main verb is a change of state verb and the resulting state is directly entailed by the semantic content of the main verb. The event type of the main verb is that of "transition".</p> <p>(B) <i>wash clean</i> type: The main verb is a change of state verb and the resulting state is directly entailed by the semantic content of the main verb, but the event type of the main verb is that of "process".</p>
II. Semi-inherent resultatives	<p>(C) <i>wipe clean</i> type: The main verb is not a change of state verb but there is a resulting state implied by the intended purpose of the main verb with particular objects associated with the verb.</p> <p>(D) <i>shake awake</i> type: The main verb is not a change of state verb but there is a resultant state implied by the intended purpose of the main verb with a variety of objects not specifically associated with the verb.</p>
III. Derived resultatives	<p>(E) <i>kiss awake</i> type: The main verb does not originally have a particular objective, but, in the case of an intentional verb, some sort of objective may be pragmatically implied. The result phrase describes the result of the implied change.</p> <p>(F) <i>water the tulips flat</i> type: The result phrase shows a result arising coincidentally in violation of the objective of the main verb.</p>

In Table 4, three major types of resultatives are distinguished according to the way a given resultative phrase is licensed: (I) inherent resultatives, (II) semi-inherent resultatives, and (III) derived resultatives. This revised typology is an expansion of the earlier dichotomy of inherent vs. derived resultatives by incorporating Thepkanjana and Uehara's (2009) suggestion on the distinction between entailed and implied results. Moreover, each of the major classes is tentatively divided into two subclasses, ending up with a total of six groups from A to F in Table 4.

Type I resultatives are licensed purely by the lexical entailments of main verbs. The distinction of subclasses A and B will be accounted for in Section 3.4 with

concrete examples from Japanese. The licensing of Type II resultatives also hinges on the lexical meanings of main verbs, but the kind of relevant meaning is slightly different from entailments in Type I. Specifically, Type II resultatives are characterized as realizing the intended purpose typically associated with individual main verbs in combination with particular objects. For example, the act of wiping something is normally associated with a particular purpose of removing dirt, water, or oil from the surface of the object, or the act of ironing a shirt is associated with a particular goal of smoothing out wrinkles on it. While such an intended purpose is generally considered pragmatic in nature and ignored in the traditional theories of verb semantics, Pustejovsky (1995) proposes to integrate such pragmatic or encyclopedic information formally into the verb's lexical semantic representation in the form of what he calls the "Telic Role" of Qualia Structure. The Telic Role information of *wipe* (i.e. removing dirt etc.) thus licenses resultatives like *dry* or *clean* in *He wiped the bottle dry/clean*, while at the same time ruling out unacceptable resultatives like *\*He wiped the bottle flat/solid/smooth*. Type IIC comprises resultatives that correspond to particular goals specified in the Telic Role of a main verb. The verbs that take Type IID resultatives, on the other hand, have a Telic Role that is not specified to a particular goal. For example, the act of shaking something could have an indefinite range of intended purposes, rendering a variety of resultative phrases possible, as in *shake someone awake*, *shake one's arm free*, *shake something loose*, and *shake oneself dry*. Finally, Type III resultatives are licensed only in particular pragmatic contexts, regardless of the main verb's entailment or implication.

The typology suggested in Table 4 is intended to show that the three major types (and their subclasses) are not distributed on an equal footing as regards productivity and acceptability but instead make up an implicational hierarchy as roughly shown in (26).

(26) The Implicational Hierarchy of Resultative Phrases

- I. Inherent resultatives (A > B) > II. Semi-inherent resultatives (C > D) >
- III. Derived resultatives (E > F)

The hierarchy implies that a language that has Type II will have Type I as well but not necessarily Type III; another language that has Type III resultatives will also have Type I and Type II. According to Kageyama (2009), sample languages are distributed on the hierarchy as shown in Table 5.

**Table 5:** Distribution of resultative predicates across languages

	A	B	C	D	E	F
English, German, Chinese	OK	OK	OK	OK	OK	OK
Hungarian, Thai?	OK	OK	OK	?	*	*
Japanese, Italian, Bengali?	OK	Limited	*	*	*	*
Greek, French	Limited	*	*	*	*	*

### 3.3 Resultatives in Japanese

As shown in Table 5, Japanese resultatives are limited to inherent resultatives of Type I. This means that in Japanese, combinations of a main verb and a resultative predicate are predictable from the main verb's LCS representations, as exemplified by garden-variety combinations of resultatives and main verbs in Table 6.

**Table 6:** Typical combinations of verbs and resultative phrases in Japanese

Verbs of coloring	<i>X-iro ni nuru</i> 'paint the color X' (X = any color); <i>X-iro ni someru</i> 'dye the color X' (X = any color); <i>Kooyoo ga makka ni irozuku</i> 'the autumn leaves turn bright red'
Verbs of disintegration	<i>komaka-ku/saikoro-gata ni/hosi-gata ni/etc. kiru(vt)/kireru(vi)</i> 'cut/be cut into small pieces/into cubes/into stars/etc.'; <i>konagona ni kowasu (vt)/kowareru (vi)</i> 'break/collapse into smithereens'; <i>mapputatu ni waru (vt)/wareru (vt)</i> 'break vt/vi into halves'; <i>komaka-ku kudaku (vt)/kudakeru (vi)</i> 'pulverize/be pulverized into small pieces'; <i>petyanko ni tubusu(vt)/tubureru (vi)</i> 'crush/be crushed flat'; <i>komaka-ku kizamu</i> 'shred into small pieces'; <i>hutatu ni/komaka-ku saku (vt)/sakeru (vi)</i> 'split/be split' in two/into small pieces'; <i>barabara ni bunkai-suru</i> 'take apart into scattered pieces'; <i>komaka-ku kuzusu (vt)/kuzureru(vi)</i> 'demolish/crumble into small pieces'
Verbs of bending	<i>U-zi ni mageru (vt)/mararu (vi)</i> 'bend/be bent into a U'; <i>mittu ni oru (vt)/oreru (vi)</i> 'fold/be folded into thirds'; <i>komaka-ku tatamu</i> 'fold into small pieces'
Verbs of heating	<i>karakara ni ageru (vt)/agaru (vi)</i> 'fry/be fried crisp'; <i>hitohada ni atatameru (vt)/atatamaru (vi)</i> 'warm/be warmed to body temperature'; <i>tamago o kata-ku yuderu</i> 'boil an egg hard'; <i>hokahoka ni musu</i> 'steam warm'; <i>makkuro ni kogasu (vt)/kogeru (vi)</i> 'char/be charred black'; <i>karikari ni yaku (vt)/yakeru (vi)</i> 'bake/be baked crisp'
miscellaneous changes of state	<i>katikati ni kooru</i> 'freeze solid'; <i>karakara ni kawakasu (vt)/kawaku (vi)</i> 'make/get parched'; <i>karakara ni hosiagaru</i> 'dry out parched'; <i>bisyobisyo ni nurasu (vt)/nureru (vi)</i> 'make/get sopping wet'; <i>pikapika ni migaku</i> 'polish to a shine'; <i>pikapika ni togu</i> 'sharpen to a gleam'; <i>komugi-iro ni hiyake-suru</i> 'tan to a golden brown'; <i>makka ni moeru</i> 'burn bright red'; <i>taira ni narasu</i> 'level flat'; <i>katikati ni katameru (vt)/katamaru (vi)</i> 'harden up (vt/vi) rock hard'; <i>guzuguzu ni yurumu</i> 'slack loose'; <i>te ga gasagasa ni areru</i> 'hands chap rough'; <i>taba ni/toozyoo ni/x no katati ni amu</i> 'knit/weave into a bundle/into a cylinder/into an X shape'; <i>bukubuku ni hutoru</i> 'turn into a blimp'; <i>garigari ni yaseru</i> 'waste away to skin and bones'; <i>dorodoro ni tokeru</i> 'melt into a syrup'

A comment is in order on the distinction between Types IA and IB. Type IA resultatives are those that are directly entailed by the main verb whose eventuality type is "transition", namely achievement and accomplishment. The verbs exemplified in

Table 6 all share this property. Kageyama (1996) assumes that what he called inherent resultatives are all telic verbs – verbs that are compatible with time-delimiting adverbials like *itizikan de* ‘in an hour’.

Verbs of cleaning like *arau* ‘wash’, *haku* ‘sweep, broom’, and *soozi-suru* ‘sweep’ pose a problem for Kageyama (1996). These verbs denote durative processes without necessarily entailing the clean state of the object as a result of the actions, and yet they are compatible with *kirei ni* ‘clean’, as in (27).

- (27) a. *Syatu o itizikan arat-ta.* / *Syatu o kirei ni arat-ta.*  
 shirt ACC one-hour wash-PST / shirt ACC clean COP wash-PST  
 ‘I washed the shirts for an hour.’ / ‘I washed the shirts clean.’
- b. *Heya o itizikan soozi-si-ta.* / *Heya o kirei ni soozi-si-ta.*  
 room ACC one-hour sweep-do-PST / room ACC clean COP sweep-do-PST  
 ‘I swept the room for an hour.’ / ‘I swept the room clean.’

While Kageyama (1996) looks upon *kirei ni* ‘clean’ in these examples as a manner adverb meaning ‘in such a way as to remove dirt’ rather than as a true resultative predicate, the sentences in (27) with *kirei ni* do in fact imply the clean states of the shirts and room obtaining as a direct consequence of washing and sweeping. This interpretation becomes apparent when it is contrasted with the adverbial meaning of the same phrase used with *kaku* ‘write’.

- (28) *Kodomo wa zibun no namae o kirei ni kai-ta.*  
 boy TOP self GEN name ACC clean COP write-PST  
 ‘The boy wrote his name beautifully.’

Obviously, *kirei ni* in (28) is not a resultative because it cannot be interpreted as ‘The boy’s name became beautiful as a result of writing’.

Washio (1997) regards *kirei ni* used with verbs of washing, sweeping, and wiping uniformly as a weak resultative on a par with *konagona ni* ‘into pieces’ used with verbs of breaking. Washio (1997: 16) comments as follows: both English *wipe* and Japanese *huku* “have a disposition toward a certain result without lexically implying such a result”, in other words, “they describe an activity which potentially affects an object in such a way that, if the object is caused to change its state, then it changes in a certain fixed direction to reach the final state where the object is free of dirt, liquid, etc.”

Washio’s (1997) unitary treatment of *konagona ni* ‘into pieces’ and *kirei ni* ‘clean’ as weak resultatives, however, does not sufficiently account for their different behavior exhibited in certain syntactic contexts such as the pseudo-cleft construction (Kageyama 2009).



- (29) a. *Kanozyo ga tyawan o wat-ta no wa*  
 she NOM tea.cup ACC break-PST NMLZ TOP  
*konagona ni da.*  
 smithereens COP COP

‘It’s into smithereens that she broke the teacup.’

*Kodomo ga otoosan no kutu o*  
 child NOM father GEN shoes ACC  
*migai-ta no wa pikapika ni da.*  
 polish-PST NMLZ TOP gleaming COP COP

‘It’s to a gleam that the child polished his father’s shoes.’

- b. #*Kanozyo ga kodomo no zubon o*  
 she NOM child GEN trousers ACC  
*arat-ta no wa kirei ni da.*  
 wash-PST NMLZ TOP clean COP COP

‘It’s clean that she washed her child’s trousers.’

#*Kanozyo ga heya o hai-ta no wa*  
 she NOM room ACC sweep-PST NMLZ TOP  
*kirei ni da.*  
 clean COP COP

‘It’s clean that she swept the room.’

As shown by (29a), Type IA resultatives co-occurring with accomplishment verbs ‘break’ and ‘polish’ retain their resultative meanings even when they are put in the pseudo-cleft construction. The sentences in (29b) involving the process verbs ‘wash’ and ‘sweep’, on the other hand, fail to entail the clean state of the objects as emerging from these actions. Instead, *kirei ni* in (29b) can be interpreted only as a manner adverbial with a meaning like ‘completely so as to remove all dirt’.

The distinction of Type IA and Type IB resultatives also manifests itself when they are put in syntactic constructions representing an ongoing event (Kageyama 2009). Consider (30), where clauses involving accomplishment verbs and Type IA resultatives are embedded in temporal clauses headed by *saityuu ni* ‘in the middle of, in the process of’.

- (30) a. *Kanozyo ga tamanegi o mizin ni kit-te iru*  
 she NOM onion ACC pieces COP break-GER be  
*saityuu ni, kare ga yatteki-ta.*  
 middle LOC he NOM come-PST

‘He dropped by when she was slicing the onions into pieces.’

- b. *Karera ga heya no kabe o massiro ni nut-te*  
 they NOM room GEN wall ACC white COP paint-GER  
*iru saityuu ni, kare ga yatteki-ta.*  
 be middle LOC he NOM come-PST  
 'He dropped by when they were painting the walls of the room white.'

Despite the fact that the slicing and painting events are not complete, the sentences in (30) clearly mean that parts of the objects (onions and walls) have already changed to the states denoted by the resultatives 'in pieces' and 'white'. This is because the verbs *kiru* 'cut' and *nuru* 'paint' entail transition from activity to result. The sentences in (30) should now be contrasted with those in (31) involving verbs of washing and sweeping.

- (31) a. *Kanozoyo ga yogoreta syatu o kirei ni arat-te iru*  
 she NOM dirty shirt ACC clean COP wash-GER be  
*saityuu ni, kare ga yatteki-ta.*  
 middle LOC he NOM come-PST  
 'He dropped by when she was washing the dirty shirt clean.'
- b. *Kanozoyo ga yuka o kirei ni hai-te iru*  
 she NOM floor ACC clean COP sweep-GER be  
*saityuu ni, kare ga yatteki-ta.*  
 middle LOC he NOM come-PST  
 'He dropped by when she was sweeping the floor clean.'

Unlike (30), the sentences of (31) do not entail the attainment of the 'clean' state even for small parts of the shirt or floor. This is because the temporal subordinator *saityuu ni* 'in the middle of' highlights the ongoing processes of washing and sweeping, so that the resultant states of 'clean' or 'free of dirt' contained in the LCS of these verbs are defocused and are not asserted.

In a nutshell, the difference between Type IA and Type IB resultatives can be attributed to the eventuality types of the main verbs they are associated with. The verbs taking Type IA resultatives are accomplishment or achievement verbs of the transition type, entailing the culmination of change. Because of this lexical property, these verbs always entail the attainment of the resultant states regardless of the tense and aspect of the sentence. On the other hand, the verbs that take Type IB resultatives are process verbs because they do not necessarily entail a clear result, as in *Syatu o aratta ga, mada yogorete iru* 'I washed the shirt, but (part of) it is still dirty'. Due to this aspectual property, the resultative *kirei ni* is construed as an attained result only when the sentence is put in the past tense, whereas it is interpreted merely as an adverbial expressing an intended goal or a manner of action when placed in atelic contexts.

As briefly mentioned above, Washio (1997) treats *arau* ‘wash’ and *huku* ‘wipe’ equally as having “a disposition toward a certain result”, identifying the phrase *kirei ni* that co-occurs with them both as a weak resultative. In actuality, however, these two verbs exhibit distinct behaviors in the range of resultative or resultative-like phrases they co-occur with. Thus, *arau* ‘wash’ may take, besides *kirei ni* ‘clean’, such phrases as *massiro ni* ‘white’ and *sinpindooyoo ni* ‘like brand-new’. By contrast, *huku* ‘wipe’ may take only *kirei ni*, excluding such phrases as *pikapika ni* ‘shiny clean’, *sinpindooyoo ni* ‘like brand-new’, or *karakara ni* ‘dry’. Such a disparity makes it implausible to treat *huku* ‘wipe’ and *arau* ‘wash’ in one and the same category. If *kirei ni arau* ‘wash clean’ belongs to Type IB, *kirei ni huku* ‘wipe clean’ may well be relegated to Type IIA (semi-inherent).

That being said, however, Type II resultatives are not generally available in Japanese. Verbs of physical impingement such as *kosuru* ‘scrub’, *momu* ‘knead, massage’, *osu* ‘push’, *tataku* ‘hit’, and *sasuru* ‘rub’ cannot take any kind of resultative in Japanese, as shown by the total ungrammaticality of (32).

- (32) a. \**Watasi wa yuka o turuturu ni kosut-ta.*  
           I       TOP floor ACC smooth COP scrub-PST  
           Lit. ‘I scrubbed the floor smooth.’
- b. #*Watasi wa otoosan no kata o yawarakaku mon-da.*  
           I       TOP father GEN shoulders ACC softly massage-PST  
           Acceptable if taken as ‘I massaged Father’s shoulders softly’.
- c. *Watasi wa kinzoku o #hirataku/#maruku/\*turuturu ni*  
           I       TOP metal ACC flat/round/smooth COP  
           *tatai-ta.*  
           hammer-PST  
           ‘I hammered the metal flat/round/smooth.’

The boldfaced phrases in (32) are ill-formed as resultative phrases (semi-inherent resultatives of Type II). Some of them, marked “#”, can be accepted only on an interpretation as manner adverbials.

These considerations lead us to conclude that Japanese allows only inherent resultatives of Type I and is not capable of licensing semi-inherent resultatives of Type II (with the possible exception of *huku* ‘wipe’), let alone derived resultatives of Type III. In this respect, Japanese makes a sharp contrast to English, which can accommodate all the three types. Presumably, Dutch, German, and other Germanic languages share more or less the same flexibility with English. However, permitting all the three types of resultatives is not the same as accepting all of them on an equal footing. As far as English is concerned, the three types apparently exhibit variation in acceptability among native speakers, in the decreasing order of Type I > Type II > Type III. The gradation of acceptability is correlated with the strength of

idiomatic and collocational restrictions on the combinations of a main verb and a resultative. Types II and III have particularly massive variation in acceptability and collocation, compared with Type I. For example, Wechsler (2005: 256) claims that as contrasted with *to wipe the table dry*, *\*to wipe the table wet* is odd even when the context makes it clear that she wiped the table and as a result it became wet. For Wechsler, who resorts to temporal telicity to account for acceptable and unacceptable resultatives, *to wipe the table dry* is grammatical because *dry* is a closed-scale adjective and can delimit the event, whereas *wet* is incompatible with the telic nature of resultative constructions because it is an open-scale adjective. Wechsler's argument, however, loses force in the face of Borer's (2005: 230) counterexample *We sponged the table wet*. In fact, the collocation *wipe X wet* can be found in actual writings, as in (33).

- (33) *She wet the short white pixie-cut hair with the washcloth, soaped the hair, and then **wiped** it **wet** with a rinsed washcloth. She dried the hair with a towel, and ...*

(Frances Julia Riemer, *Working at the margins*, State University of New York Press, 2001)

Likewise, while Wechsler (2005) asterisks *\*hammer the metal safe* in contrast to the impeccable *hammer the metal flat*, Verspoor (1997) claims that a proper pragmatic context renders it acceptable, as in (34).

- (34) [In a context where the metal has a sharp edge and is dangerous.]  
*In order to prevent further injuries, John hammered the metal **safe**.*  
 (Verspoor 1997: 129)

Verspoor's (1997) claim is strengthened by Boas (2011), who reports that when he checked the acceptability of *hammer the metal safe* used in a fictitious context similar to (34), 23 informants out of 40 judged it acceptable, though 9 judged it only marginally acceptable and 8 unacceptable. Examples like (33) and (34) indicate that the acceptability of novel combinations in Type III resultatives is strongly influenced by context.

Now, it is important to point out that previous studies on English resultative constructions, whether in generative and formal-semantic frameworks or cognitive and usage-based frameworks, have stressed the importance of context and conventionalization for all kinds of resultatives. Such a holistic view disregards the fact that resultatives fall into several distinct semantic types. The idea in the present chapter is that resultatives are broadly classified into three groups in terms of the degree of predictability from a verb's meaning. In particular, the distinction between Type II and Type III resultatives in Table 4 pertains to the *wipe X wet* debate introduced

above. Given the distinction between Type II and Type III, it is highly plausible to assume that fully acceptable combinations like *wipe the table clean/dry* and *hammer the metal flat* are established combinations of Type II resultatives because they utilize the lexical information of a verb's Telic Role (i.e. intended purposes that are socially conventionalized), whereas non-established combinations like *wipe the table wet* and *hammer the metal safe* are Type III resultatives, whose acceptability is heavily dependent on the availability of suitable online information from a particular pragmatic context. Perhaps because Type III resultatives in English have a relatively short history of about 400 years (see (25)), they have not attained full productivity, as seen from the fact that not all native speakers accept *wipe X wet* or *hammer X safe*. In the next section, we will examine resultative compound verbs in Chinese to test the validity of our proposed typology.

## 4 Resultative compound verbs in Chinese

As noted earlier, Chinese resultative compound verbs permit all of Type I, Type II, and Type III resultatives even more liberally than English resultative constructions. The difference between the two languages can be confirmed by comparing English *wipe X dry* / ?*wipe X wet* with the Chinese counterparts. In English, intended cause-result relations like *wipe X dry* are markedly more acceptable than unintended cause-result relations like ?*wipe X wet*. By contrast, Chinese accepts both cases almost equally, as exemplified in (35) and (36).

(35) Cases where the object phrase is an argument of V1

- a. *Zhangsan ba chenshan xi-bai-le*. [intended result]  
*Zhangsan DISP shirt wash-white-PERF*  
 'The shirt became white as the result of Zhangsan's washing.'
- b. *Zhangsan ba chenshan xi-hei-le*. [unintended result]  
*Zhangsan DISP shirt wash-black-PERF*  
 'The shirt became black as a result of Zhangsan's washing.'

(36) Cases where the object phrase is not V1's argument.

- a. *Zhangsan dapin-chu-le yige ziji-de shijie*. [intended result]  
*Zhangsan struggle-arise-PERF one-CLF himself-DE world*  
 'There was a new world as a result of Zhangsan's struggling.'
- b. *Zhangsan ba chuangupu tiaota-le*. [unintended result]  
*Zhangsan DISP bed jump-collapse-PERF*  
 'The bed collapsed as a result of Zhangsan's jumping.'

In what follows, we will suggest a historical and syntactic reason for the liberal usage of resultative compound verbs in Chinese.

Chinese has a number of Verb-Verb compounds whose members are combined in a variety of semantic relations. Among them, resultative compound verbs need special treatment. The theoretical approaches to this particular class of compound verbs can be roughly divided into two: a lexical approach (Yafei Li 1993; Shen 2007; Shen and Mochizuki 2009) and a syntactic approach (Sybsema 1997, 1999; Huang 2006; Shen and Lin 2003, 2009). The plausibility of a syntactic approach to Chinese resultative compound verbs was already suggested in (14), where it was pointed out that the Transitivity Harmony Principle, which governs the combinatory possibilities of Japanese lexical compounds, does not pertain to Chinese (J. *\*naguri-sinu* [hit-die] vs. C. *da-si* [hit-die]). Prima facie evidence in favor of the syntactic approach is found in the verb-fronting construction illustrated in (37).

- (37) Q: *Ni chi yu ma?*  
           2sg eat fish Q  
           ‘Do you eat fish?’

A: *Chi shi chi, keshi chi bu duo.*  
     eat COP eat but eat not many  
     ‘I do eat it, but I don’t eat it much.’

(37) is a question and answer pair. In the answer pattern, the verb is focused with the pattern V- *shi* [copula]-V (cf. Cheng and Vicente 2013). Noteworthy is the fact that this pattern can only focus a syntactic constituent; that is, part of a lexical word cannot be syntactically fronted, due to the principle of lexical integrity. This characteristic allows the differentiation of lexical and syntactic compound verbs as the latter, but not the former, allow focusing.

When focusing the compound verb *duan-lian* [train-polish] ‘train’, as shown in (38-A1), the whole V1-V2 compound verb can be focused but, as shown in (38-A2), focusing V1 alone results in ungrammaticality.

- (38) Q: *Ni duan-lian shenti ma?*  
           2sg train-polish body Q  
           ‘Do you do physical training?’

A1: *Duan-lian shi duan-lian, keshi ...*  
     train-polish COP but  
     ‘I do train, but ...’

A2: *\*Duan shi duan-lian, keshi ...*  
     train COP train-polish but

The ungrammaticality of (38-A2) shows that the compound verb *duan-lian* is formed in the lexicon and not in the syntax. In other words, the compound verb is syntactically one word, not two.

Applying the same test to *da-si* [hit-die] ‘kill’ gives the results shown in (39).

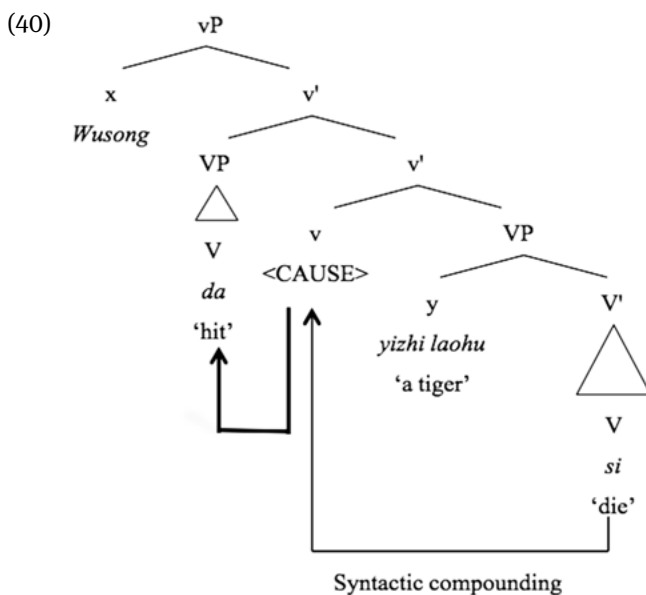
- (39) Q: *Wusong da-si na-zhi laohu le ma?*  
 Wusong hit-die that-CLF tiger PERF Q  
 ‘Did Wusong shoot that tiger to death?’

A1: *Da-si shi da-si le, keshi...*  
 hit-die COP hit-die PERF but  
 ‘He did shoot it to death, but ...’

A2: *Da shi da-si le, keshi...*  
 hit COP hit-die PERF but  
 ‘He did shoot it, shot it to death, but ...’

In (39-A1) the entire compound verb has been placed in the initial focus position, as in (38-A1). This shows that *da-si* is a syntactic constituent (a compound verb). However, in the case of *da-si*, it is also possible to detach V1 (*da*) and place it in the initial position as shown in (39-A2). This contrasts sharply with the ungrammaticality of (38-A2), in which the *duan* of *duan-lian* was detached and placed in the initial position. The fact that both (39-A1) and (39-A2) are possible demonstrates that, while the compound verb *da-si* forms a syntactic constituent, syntactically *da* and *si* are each also constituents.

In what follows, we will present historical and dialectal arguments reinforcing the syntactic analysis. Specifically, we postulate that the resultative compound verb *da-si* [hit-die] stems from an English-like syntactic structure where *da* ‘hit’ and *si* ‘die’ occupy different positions in the base structure, as outlined in the tree diagram of (40).



In (40), V2 *si* ‘die’, generated in the lower VP, is incorporated with small *v*, a phonetically null verb that represents the semantic predicate CAUSE. Moreover, because of the tendency for syntactic elements to become agglutinated in Mandarin Chinese, the unit of CAUSE+V2 is further incorporated with V1 *da* ‘shoot’, leading to a compound verb structure *da-si* on the surface.

The plausibility of the proposed structure is supported by evidence from the historical development of the relevant construction as well as from dialects of contemporary Chinese. Liang (2001), Li (2003), and other researchers observe that Ancient Chinese did not have morphological compound verbs representing results but instead utilized serial verbs to express cause-result relations, as in (41).

(41) The Warring State Period (403–221BC)

余 助 苗 长 矣  
 Yu zhu miao zhang yi.  
 1SG help seedling grow SFP  
 ‘I help the seedling to grow.’  
 (*Gongsunchou*, *Mengzi* I [孟子公孫丑上], 372–289BC)

The V1 *zhu* ‘help’ in (41) is an action verb with no entailment of a result, and the V2 *zhang* ‘grow’ is a change of state verb. No overt verb denoting CAUSE is found in this Ancient Chinese structure.

In Middle Chinese, a compound verb structure like that in (42) emerged. As argued by Ōta (1958), Li (1987), and Jiang (1999), the compound structure originated from a syntactic structure with V1 and V2 in separate positions.

(42) The northern Wei period (386–534AD)

汝 何 以 辄 打 折 其 脚?  
 Ru he yi zhe da she qi jiao?  
 2SG what with then hit break(vi) that foot  
 ‘Why do you then break his foot?’  
 (*Xianyu-jing* [賢愚經], 5th c.)

The question is how compound verbs like *da-she* [hit-break] grew out of the syntactic structure with two separate verbs. Investigating the vernacular document *Qimin Yaoshu* (authored by Jia Sixie in the northern Wei period), Furuya (1985, 2005) finds that the resultative constructions in the document are realized as [V1+CAUSE+V2] with a verb denoting ‘cause’ between V1 and V2, as shown in (43). He also points out that this structure is also found in vernacular documents in the period of the Song Dynasty.



## (43) [Vt-CAUSE-Vi]

曝                      令              干  
*pu*                      *ling*              *gan*  
 expose.to.sun CAUSE dry(vi)  
 ‘to expose [something] under the sun and cause it to dry’  
 (*Qimin Yaoshu* [齐民要术] 2-10-127)

In (43), the first verb (*pu*) is followed by a causative verb (*ling*), which in turn is followed by the resultative (*gan*). According to Furuya (1985, 2005), there are 217 instances of this type of construction in the same document, the most prominent type in it. Of special importance is the syntactic position of the undergoer of the causative event represented by the first verb (V1). Logically speaking, two positions are conceivable: the object position of V1, as in (44), and the subject position of the change of state verb (V2), as in (45).

## (44) [Vt-Object-CAUSE-Vi]

温              酒              令              暖  
*wen*              *jiu*              *ling*              *nuan*  
 warm(vt) wine CAUSE warm(vi)  
 ‘to warm the wine and cause it to become warm’  
 (*Qimin Yaoshu* 5-52-367)

## (45) [Vt-CAUSE-Subject-Vi]

搅和              令              饭              散  
*jaohe* *ling*              *fan* *san*  
 mix CAUSE rice scatter(vi)  
 ‘to mix the rice and cause it to scatter’  
 (*Qimin Yaoshu* 7-65-501)

In (44), V1 takes an object and is then combined with the unit of [causative verb + change of state verb]. According to Furuya (1985, 2005), there are 116 instances of this type in the document, a significant number. However, there are also examples like (45), where the undergoer of the event shows up in the subject position of V2, with V1’s object missing. There are only 9 instances of this type. In these examples, V1 does not project its arguments in the syntactic structure.

Furuya (2005) further points out that two resultative construction structures were attested in the first half of the 6th century AD: [V1 (NP) *ling* (NP) V2] and [V1-V2 NP]. In other words, the semantic concept of causation, CAUSE, can be either overt (represented by *ling*) or covert at this stage. If we follow the model of grammaticalization proposed by Bybee, Perkins, and Pagliuca (1994), the principle of “absorption of contextual meaning” is particularly relevant, suggesting that the resultative constructions in Chinese evolved along the following path:

- (46) The evolution of the expression of causal chain in Chinese
- a. Separate structure: [x V1(ACT)] + [y V2(BECOME)]  
     ↓
  - b. Addition of CAUSE: [x V1(ACT)] + CAUSE + [y V2(BECOME)]  
     ↓
  - c. Compounding in syntax: x [V1(ACT)-CAUSE-V2(BECOME)] y

As schematically shown in (46), the ancient form of the Chinese resultative construction is the same as the serial construction in Thai; namely, V1 and V2 are separate, and the cause-result relation between the two verbs is inferred from the context (see the example in (13a)). Starting from the 6th century AD, however, the contextually inferred notion CAUSE was built structurally into the syntactic construction as an independent causative verb, yielding the construction of (46b), which in turn gave rise to syntactic compound verbs in the modern Beijing dialect, as shown in (46c).

Our proposal receives support from the Southern Min dialect (Taiwan), which retains many features of Ancient Chinese. In particular, the resultative construction in this dialect, according to Cheng, Shen, and Huang (1994) and Shen and Lin (2003, 2009), still retains the overt causative verb *ho*, as shown in (47).

- (47) a. *Li na tsau, gua toh pha ho i/li si.*  
           you if leave I then hit CAUSE he/you die  
           ‘If you leave, I will hit him/you to death.’
- b. ?*Li na tsau, gua toh pha-si i/li.*  
           you if leave I then hit-die he/you  
           (Same meaning as 47a)

Just like the Middle Chinese example in (43), the verb sequence in (47a) overtly exhibits the causative verb *ho* between the action verb ‘hit’ and the change of state verb ‘die’. According to our informants living in southern Taiwan, the compound verb structure in (47b), where the causative verb disappears, has only low acceptability, though in northern Taiwan both (47a) and (47b) are fully acceptable. Intriguingly, if the pronouns *i/li* ‘he/you’ in (47a) are replaced by a full NP, the sentence becomes ungrammatical, as in \**Li na tsau, gua toh pha ho Ong-e si* ‘If you leave, I will hit Ong-e to death’. This peculiarity will receive a natural account if we assume that a full NP like *Ong-e* blocks head movement of the lower verb ‘die’ in compound formation whereas a pronoun is allowed to intervene because it functions as a clitic and is fused into the verb sequence *pha ho i/li si* as a morphological compound.

We have argued here that Chinese resultative compound verbs are generated from the syntactic structure shown in (40) that includes a semantic verb CAUSE. If this analysis is correct, it leads to a natural explanation for why Chinese allows a wider scope of Type III resultative predicates. Namely, they are allowed because the

concept CAUSE directly reflects the “causative chain” of action (ACT) → causation (CAUSE) → change (BECOME) hypothesized in cognitive linguistics. In principle, in a Chinese resultative compound verb, no matter what kind of combination of V1 and V2 it may be composed of, an interpretation is possible with V1 expressing a causing event and V2 expressing a resulting event. In contrast, in English resultative constructions, since there is no syntactic evidence upon which to posit a semantic predicate CAUSE, a causative relation between the main verb showing an action and the resultative predicate showing a resulting state must be inferred semantically or pragmatically. As a result, the range of acceptable Type III resultative predicate constructions in English varies by the context and by speaker. In the serial verb construction in Thai, on the other hand, the main verb must always be transitive and constructions with intransitive verbs like the English *She ran the sneakers threadbare* with the verb *run* or *She cried her eyes out* with *cry* are not acceptable. From these facts, we can say that, while Chinese, English, and Thai resultative constructions are all syntactic, they each have the different structures shown in (48).

(48) Syntactic structures of resultative constructions

Chinese: [Subject V1] CAUSE [Object V2] → V1-V2 by syntactic compounding

English: [Subject V1] [Object Resultative]

Thai: [Subject V1 Object] [V2]

Since Japanese has none of the syntactic structures in (48), resultative predicates in Japanese do not have the freedom of those in Chinese, English, or Thai, and are limited to lexically specified verb-resultative predicate combinations.

## 5 Conclusion and future research perspectives

Centering the discussion on Japanese data, this chapter has sketched a possible direction for constructing a typology of resultative constructions within individual languages and across different languages. Since the morphosyntactic manifestations of resultatives diverge from language to language, we proposed a semantic approach that has universal applicability. Specifically, based on how a resultative can be predicted or inferred from the main verb in combination with the theme nouns, three types of resultatives are differentiated – Type I “inherent”, Type II “semi-inherent”, and Type III “derived” – each with subcategories. The three types have an implicational relation that accounts not only for the distribution of resultatives in individual languages but also for variable degrees of acceptability and the direction of historical development within a single language.

It should be stressed that a comparison of Japanese and English has contributed greatly to the formulation of the hierarchical typology. The resultatives in Japanese

are by and large limited to Type I (inherent resultatives), whereas some other languages permit Type I and Type II resultatives, to the exclusion of Type III. Among the most liberal languages, equipped with all of Types I, II, and III, are English and Chinese. Chinese appears even more unrestricted than English, arguably because its resultative compound verbs are formed by syntactic incorporation with the mediation of the covert predicate CAUSE. It is expected that the classification suggested in this chapter, admittedly inadequate as such because of its limited empirical coverage, will help to bring forth a deeper understanding of these intriguing constructions as it is tested against a diversity of languages.

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Yuu Kuribayashi

## 7 Verb–Verb compounding in Japanese and Turkish

### 1 Introduction

Japanese verb-verb (V-V) compounding is a very productive process of word formation. At first sight, typological properties such as OV syntax and agglutinating morphology appear to be factors that contribute to the abundance of V-V compounds in Japanese. However, if we examine Turkish, which is also an agglutinative language with a verb-final word order, this view is thrown into doubt. Specifically, the types of V-V compound verbs in Turkish are highly limited to only a few aspectual expressions. As stated by Korkmaz (2003: 791), one of the representative Turkologists (traditional Turkish grammarians), there is not much research devoted to the issues of compound verbs in Turkish. Considering these facts, our aim in this chapter is (i) to investigate the V-V complexes (complex verbs and compound verbs) in Turkish seeking adequate criteria for classification, and (ii) to provide a novel classification for V-V complexes in Turkish making use of contrastive points of view from Japanese. We focus on the analysis of V-V compounding and show that the lexical and syntactic properties of V-V complexes play an important role in explaining the differences between Japanese and Turkish. After reviewing the general characteristics of Japanese V-V compounding that are relevant to Turkish compounding in Section 2, we review a few previous studies and discuss general characteristics related to V-V compounds and verb-auxiliary complexes in Turkish in Section 3. In Section 4, after showing that V-V sequences in Turkish form a single predicate, we examine the similarities and differences between Japanese and Turkish V-V compounding with special emphasis on the distinction between syntactic and lexical compounds, such as the occurrence or nonoccurrence of passives, negatives, reduplication, and light verb constructions in the V1 position of a compound verb. Section 5 will conclude the chapter with a suggestion for other Altaic languages.

### 2 Verb-Verb compounds in Japanese

This section briefly surveys the system of Japanese V-V compound verbs based on the proposal by Kageyama (2016). Japanese V-V compound verbs are morphological amalgamations of two verbs, where the first verb (V1) in the *ren'yō* or infinitive form is morphologically adjoined to the second verb (V2) in its stem form and the whole combination is inflected for tense and aspect, as in [*kaki-hazime*]-*ta*

([write<sub>INF</sub>-begin<sub>STEM</sub>]-PST). According to Frellesvig (2010: 56), the primary function of the infinitive in Old Japanese was to “form a nonfinal coordinate predicate coordinate with a following predicate” in clause structure. In Present-day Japanese, the role of the infinitive as a clause coordinator is giving way to the gerundive *-te*, which developed relatively recently and may plausibly be analyzed as a kind of perfective inflection. A rough division of labor between the infinitive and the gerundive in Present-day Japanese is that the former tends to be used in morphological structures as in the V-V and V-N compounds in (1a) and (1b) as well as lexical nominalizations as in (1c), while the *V-te* gerundive is used in syntactic structure as a clause coordinator or a converb (a verb modifier).

- (1) a. V-V compound verbs: *tataki-tubusu* [strike<sub>INF</sub>-smash] ‘knock to pieces’,  
*tabe-kuraberu* [eat<sub>INF</sub>-compare] ‘compare the taste (by eating)’
  - b. V-N compound nouns: *yaki-niku* [broil<sub>INF</sub>-meat] ‘broiled meat’, *nomi-mizu*  
 [drink<sub>INF</sub>-water] ‘drinking water’
  - c. V-to-N conversion (nominalization): *tasuke* ‘help’, *asobi* ‘play’  
 Kageyama (2016: 273–274)

The wordhood of compound verbs in Japanese is demonstrated by comparing them with the ‘V-*te* V’ complex verbs like *yon-de simau* [read-GER put.away] ‘finish reading’. A popular diagnostic test for wordhood is particle insertion. As predicted by the general principle of lexical integrity, which states that the internal structure of a word cannot be disrupted by syntactic elements, Verb<sub>INF</sub> + Verb compound verbs cannot be separated by a focus particle like *mo* ‘also’.

- (2) a. *tabe-hazimeru* [eat<sub>INF</sub>-begin] ‘begin to eat’ (syntactic V-V compound)  
*\*tabe mo hazimeru* [eat<sub>INF</sub> also begin]
  - b. *huri-yamu* [fall<sub>INF</sub>-stop] ‘(rain) stop falling’ (lexical V-V compound)  
*\*huri mo yamu* [fall<sub>INF</sub> also stop]

Kageyama (1989) introduced the distinction between lexical and syntactic compounds in V-V compounding. Major diagnoses for this distinction have to do with the occurrence or nonoccurrence of passives, verbal anaphora, and light verb constructions in the V1 position. As illustrated in Table 1, lexical compound verbs exclude syntactic elements from their V1 position because they are tightly integrated, whereas syntactic compounds accommodate them in their V1 position. In addition to syntactic criteria, the two classes of compounds verb differ in productivity, lexical restrictions, semantic transparency, and mutual ordering. Lexical compound verbs, which are subject to a variety of lexical restrictions in the combination of two verbs, are specified in the lexical entries of dictionaries. In contrast, syntactic compound

verbs have no dictionary entries because their V1 members are unconstrained. Their V2 heads are lexically limited to 30 grammaticalized verbs (Kageyama 2016: 283).

**Table 1:** Samples of syntactic criteria for the lexical-syntactic distinction

	Lexical compound verbs	Syntactic compound verbs
Passives in V1	*[os-are]-aku [push-PASS]-open 'open by being pushed'	[ais-are]-tuzukeru [love-PASS]-continue 'continued to be loved'
Verbal anaphora	naki-sakebu ⇒ *[soo si]-sakebu cry-scream [so do]-scream lit. 'scream by doing so'	kaki-oeru ⇒ [soo si]-oeru write-finish [so do]-finish 'finish doing so'
Light verb construction in V1	*rakka-si-yamu [fall-do]-stop 'stop falling'	[rakka-si]-owaru [fall-do]-stop 'stop falling'

Kageyama (2016: 278)

The two types of V-V compounds in Japanese strictly obey an ordering restriction when they appear sequentially to form a larger compound verb. The restriction allows a lexical compound to be embedded in a syntactic compound, as in (3a), but the reverse order, as in (3b), is systematically excluded.

- (3) a. [[lexical]-syntactic]                      b. \*[[syntactic]-lexical]  
       [[huri-yami]-hazimeru]                [[huri-hazime]-yamu]  
       [[rain-stop]-begin]                    [[rain-begin]-stop]

The thirty head verbs (V2) of syntactic compound verbs are grammaticalized to phasal (or aspectual) meanings, as illustrated in Table 2.

**Table 2:** Samples of syntactic compound verbs classified semantically

Aspectual notions	Examples
inception	V-kakeru [hang, vt.] 'be about to V', V-hazimeru [begin, vt.] 'begin to V'
duration	V-tuzukeru [continue, vt.] 'continue to V'
completion	V-oeru [finish, vt.] 'finish V-ing', V-owaru [end, vi.] 'stop V-ing',
incompletion	V-sokonau [harm, vt.] 'miss V-ing', V-sokoneru [harm, vt.] 'fail to V', V-wasureru [forget] 'forget to V'
habituation	V-nareru [get accustomed, vi.]
reciprocity	V-au [meet, vi.] 'V reciprocally'

We have briefly surveyed the properties of V-V compound verbs in Japanese. The distinction between lexical and syntactic V-V compounds is also important in Turkish compounding and will be discussed at length in Sections 4.2 and 4.3.

### 3 Verb-verb compounds and verb-auxiliary complexes in Turkish

In this section, we introduce the traditional view of the basic properties of verb-verb compound verbs and verb-auxiliary sequences as complex predicates. Turkish shares with other Turkic languages such linguistic features as vowel harmony within a word or between a word and its suffixes, agglutinative morphology, and OV word order. After reviewing two representative descriptions of V-V compounds in traditional grammar, we will show the most promising description based on the classification of Göksel and Kerslake (2005).

#### 3.1 Overview

Ergin (1985) is representative of Turkology works written in Turkish. Ergin (1985) classified V-V compounds in Turkish into four semantic categories and was mainly concerned with the Verb (V1) + Gerund *A(a~e)* or *I(i~ı~u~ü)* + Verb (V2) types.

**Table 3:** Samples of compound verbs classified semantically (Ergin 1985: 387)

Aspectual/modal notions	Examples of V2
Ability	<i>gel-e bil-</i> [come-GER know-] ‘be able to come’
Easiness, Suddenness	<i>tut-u ver-me-</i> [catch-GER give-NEG-] ‘not to catch immediately’
Trial, Duration	<i>gel-</i> [come], <i>gör-</i> [see], <i>dur-</i> [stop], <i>kal-</i> [remain], <i>koy-</i> [put]
Simulative	<i>düş-e-yaz-</i> [fall-GER-make.a.mistake (obs.)] ‘almost fall’

Lewis (1991), the most popular traditional Turkish reference grammar ever published in English, classified compound verbs in Turkish into five categories with respect to aspectuality and modality. It is also shown that V1 or V2 in V-V compounds interacts with passive, negation and semantic scope, which will be discussed Sections 3 and 4.

**Table 4:** Samples of compound verbs classified semantically (Lewis 1991: 191–192)

Aspectual/modal notions	Examples
continuity	<i>söylen-e-dur-</i> [grumble-GER-stop], <i>söylen-ip dur-</i> [grumble-CONV stop-] ‘keep grumbling’ <i>ne-ler çek-e-gel-di</i> [what-PL pull-GER-come-PST] ‘what things he-has-always-suffered’
‘to remain’	<i>don-a-kal-dı-m</i> [freeze-GER-remain-PST-1SG] ‘I was left freezing’
‘mind you don’t’	<i>oraya git-mi-ye-gör</i> [there go-NEG-GER-see] ‘mind you don’t go there’
sudden action	<i>köprü çök-ü-ver-di</i> [bridge collapse-GER-give-PST] ‘the bridge suddenly collapsed’
finality	<i>iyiliğ-e kemlik ol-a-gel-miş ol-a-gid-er</i> (proverb) [kindness-DAT evil become-GER-come-PFT become-GER-go-AOR] ‘kindness has always been requited with evil and always will be’

All of above classifications are based on the semantics of V2, and the types of V-V compounding are limited to four or five. It is important to note that previous descriptions identify sequences of two fully tensed verbs (e.g. *unut-muş git-miş-im* [forget-PFT go-PFT-1SG] ‘I’ve totally forgotten’) as V1+V2 compound verbs (cf. Sections 3 and 4). Furthermore, Göksel and Kerslake (2005) claim that, based on the morphological shape attached to the V1 stem, verb-auxiliary complexes and verb-verb compounds in Turkish can be classified into two groups: (a) Verb-converb *I(i~ı~u~ü)p* + Verb and (ii) Verb-gerund *A(a~e)* or *I(i~ı~u~ü)* + Verb.

- (4) a. Verb-converb (*Ip*) + Auxiliary Verb (V1-V2 complex)  
*V-İp bil* [-CONV know], *V-İp ver* [-CONV give], *V-İp gel* [-CONV come],  
*V-İp dur* [-CONV stop], *V-İp kal* [-CONV remain]
- b. Verb-gerund (*Ip*, *A*, *I*) + Auxiliary Verb (V1-V2 compound)  
*V-a bil* [-GER be able] Possibility, *V-i ver* [-GER give] Swiftly, *V-a gel* [-GER come] Habit, *V-a dur* [-GER stop] Continuity, *V-a kal* [-GER remain] Continuity

The choice of V1 in “V1-*Ip* V2” complexes is generally unrestricted. The converb in *-(y)Ip* represents a conjunctive type that is widespread in Turkic languages. Some types of “V1-*Ip* V2” complexes show the properties of a compound word, as demonstrated in Sections 3 and 4. Compound verbs in Turkish are formed by using auxiliary verbs, which cannot stand on their own and occur with another verb. There are two types of auxiliary verb in Turkish: bound and free auxiliaries, as shown in (5a) and (5b), respectively (Göksel and Kerslake 2005: 157).

- (5) a. Bound (i.e. suffixed) auxiliaries:  
 -(y)*Abil* ‘possibility suffix’, -(y)*Iver* ‘swiftness suffix’, -(y)*Ayaz* ‘mistake suffix’, -(y)*Adur* ‘continuity suffix’, -(y)*Akal* ‘duration suffix’.
- b. Free auxiliaries (auxiliary verbs):  
*ol-* ‘become, be’, *et-* ‘do’, *gel-* ‘come’, *dur-* ‘stop’, *kal-* ‘remain’, *düş-* ‘fall’, *bulun-* ‘be, find itself’, *eyle-* ‘do’ and *buyur-* ‘do’.

The first type is the grammaticalized form of “gerund” plus auxiliary verb, represented by -(y)*A*, where the capitalized vowel alternates with the preceding vowel according to vowel harmony, forming a composite suffix: -(y)*A-bil* (-GER-know) ‘possibility suffix’. Sometimes the terms “gerund” and “converb” are used interchangeably in Turkic linguistics to refer to non-finite verbs in adverbial clauses (cf. Johanson 1995). In this chapter, -(y)*A* is referred to as a gerund, in which the morphological and semantic relations between V1 and V2 are tight, and -(y)*Ip* is referred to as a converb, which is essentially the adverbial form of a verb conjoining clauses that are of equal semantic status with respect to tense/aspect/modality. In addition, the infinitive suffix -*mAk* also forms a verbal complex with a following verb: -*mAğ-A başla-*(-INF-DAT begin-) (cf. infinitival double passive in Section 4.2).

Compound verbs are formed by using bound and free auxiliaries. The verb roots *bil-* ‘know’, *ver-* ‘give’, *dur-* ‘stop’, *yaz-* ‘make a mistake’ (obs.), and *kal-* ‘remain’ can also function as bound auxiliaries appearing as part of the composite suffixes -(y)*Abil*, -(y)*Iver*, -(y)*Adur*, -(y)*Ayaz* and -(y)*Akal*, which follow the main verb. Complex predicates contain a converb of the lexical verb (V1) and a post verb (V2), which specifies aspectual properties of V1, as in *yaz-ıp dur-* [write-CONV stop] ‘keep writing’. Although focus particles such as *DA* ‘also’ may be inserted between V1-*Ip* and V2, the complex predicates are regarded as words (cf. Csató 1999: 223). They undergo the process of grammaticalization, e.g. *düş-e-yaz-dı-m* [fall-GER-mistake-PST-1.SG] ‘I almost fell down, but I did not’, in which the V2 *yaz-* is not used in its original meaning ‘to write’. In Göksel and Karslake (2005), five types of V-V compound verb forms containing bound auxiliaries are presented, most of which carry aspectual meanings such as possibility, swiftness, habit, or continuity in V2, as the following examples show. Note that -*yebil-* in (13a) forms a grammaticalized composite suffix: -(y)*A-bil* (-GER-know) ‘possibility suffix’.

- (6) a. Possibility  
*yi-yebil-ir* [eat-POBL-AOR] ‘be able to eat’
- b. Swiftness, Suddenness suffix  
*gir-i-ver-di* [enter-GER-give-PST] ‘suddenly entered’  
*yi-yi-ver!* [eat-GER-give] ‘Eat, immediately!’

## c. Habitual, Customary

*kutla-ya-gel-* [celebrate-GER-come-] ‘have been celebrating’

## d. Continuity

*yürü-ye-dur-* [walk-GER-stop] ‘keep on walking’

(Göksel and Karslake 2005: 157–158)

### 3.2 Semantic classification of compound verbs

In Turkish, V-V compounding is not a completely productive word formation process, except for the lexicalized suffix *-ebil* meaning possibility. The historical development of the lexicalized suffix is worth mentioning to understand the compounding process of Turkish. The lexicalized suffix originated from *V1-e bil* (V2)- [V1-GER know (V2)-] and was reanalyzed as a possibility suffix. The lexicalization or grammaticalization of a V2 generally stops at the stage of desemanticization (semantic shift to aspectual meaning) and has not developed into decategorization except for the lexicalized suffix *-ebil*. Thus, the suffix *-ebil* has a rare status in that it originated from verbal compounding. The V2 auxiliary verb *kal-* ‘remain’ can be compounded with a limited number of verbs in V1, e.g. *bak-a kal-* ‘remain staring’. Other verbs can be used with the converb form *-Ip* as well as the gerund *-A*: *gid-ip dur-* [go-CONV stop-] ‘keep going’, *otur-up kal-* [sit-CONV remain] ‘leave sitting’.

**Table 5:** V1-V2 compound verbs in Turkish

Types of verbs	Meaning	Lexicalization
V1- <i>I-ver</i> [V1-GER-give]	Suddenness, Swiftness	lexicalized
V1- <i>A-gel</i> [V1-GER-come]	Habitual	semi-lexicalized
V1- <i>A-kal</i> [V1-GER-remain]	Continuity	semi-lexicalized
V1- <i>A-dur</i> [V1-GER-stop]	Continuity	semi-lexicalized
V1- <i>Ip kal</i> [V1-CONV remain]	Continuity	
V1- <i>Ip dur</i> [V1-CONV stop]	Continuity	

The compound verbal form of V1 in *V1-A-dur* [V1-GER-stop] is mostly used with motion verbs, indicating the continuous nature of the action (see Section 3.3 for its morphological wordhood). The compound verbal form of *V1-A-kal* [V1-GER-remain] is exclusively used with V1 verbs like *bak-* ‘look’, *don-* ‘freeze’, and *şaş-* ‘be surprised’. In these respects, compound verbs consisting of their V1s and *-gel*, *-kal*, or *-dur* are regarded as semi-lexicalized, where the meaning of V1 is more or less predictable from its original meaning. The gerund forms in V1+V2 verbal sequences can be found in both verbal compounding and verbal complexes (the conjunctive form of

V1 with V2). The V2 of V1-*Ip*+V2 compound verbs bears an aspectual meaning when V2 functions as a free auxiliary. In the case of verbal complexes, V1+*Ip* functions as a phrasal or clausal conjunct and the verbal complex as a whole has the status of a single predicate .

Turkish also has fully inflected V-V complexes in which both V1 and V2 have a tense suffix, as in *Tren geç-ti git-ti* [train pass-PST go-PST] ‘The train has gone’. Nonetheless, they have the property of lexical integrity in that their members cannot be separated by particles (see Section 4.2). Idiomatization of the V-*Ip*+V complex is not frequent, but sometimes occurs, as in *al-ıp gel-* [take-CONV come-] ‘to bring’ and *ol-up bit-* [come.into.existence-CONV end] ‘to happen’ (cf. Johanson 1995).

### 3.3 Morphological wordhood

Traditional grammarians of Turkish linguistics (Ergin 1985; Lewis 1991; Göksel and Kerslake 2005) have not paid attention to whether a given V1 + V2 string forms a “word” or not. Several tests for wordhood have been proposed on the basis of the general principle of lexical integrity, which stipulates that the internal structure of a word cannot be disrupted by syntactic elements. In (7), (8), and (9), for example, the particle *DE* cannot intervene between V1 and V2 in lexical V-V compounds. Only by placing a special stress on V1 verbs can the b-example be accepted in (7) (see Section 4.2).

- (7) a. *yi-yebil-ir* [eat-POBL-AOR] ‘be able to eat’ (lexicalized V-V compound) vs.  
       b. *\*yi-ye-DE-bil-ir* [eat-GER-also-know-AOR] ‘be able to eat also’
- (8) a. *gir-i-ver!* [enter-GER-give] ‘enter quickly’ (lexical V-V compound) vs.  
       b. *\*gir-i-DE-ver!* [enter-GER-also-give] ‘enter quickly, also’
- (9) a. *yürü-ye-dur* [walk-GER-stop] ‘keep on walking!’  
       (lexical V-V compound) vs.  
       b. *\*yürü-ye-DE-dur!* [walk-GER-also-stop] ‘keep on walking, too!’

All of the V1-A+V2 compound verbs given above disallow particle insertion, giving them “word” status. There are a few other examples, such as *ol-up bit-* [come.into.existence-CONV end] ‘to happen’, which are regarded as lexicalized expressions.

### 3.4 Syntactic and lexical V-V compound verbs

This subsection briefly sketches how the fundamental distinction between lexical and syntactic compounds advocated by Kageyama (1989, 1993, 2013, 2016) for Japanese V-V compound verbs applies to Turkish. An important similarity is that the V1 verbs



in both syntactic and lexical classes have the converb suffix *-ip*, but the two classes differ in the productivity, lexical restriction, and semantic transparency of the V2 verbs. For example, the V2s of lexical V-V compounds are limited to a few aspectual meanings, but syntactic V-V complexes have no such restrictions.

- (10) Lexical V-V compound verbs  
 Verb in Gerund (*A, I*) + Bound Auxiliary  
*V-a bil* [-GER be able] Possibility, *V-i ver* [-GER give] Swiftness, *V-a gel* [-GER come] Habit, *V-a dur* [-GER stop] Continuity, *V-a kal* [-GER remain] Continuity
- (11) Syntactic V-V verbal complexes  
 Verb in Gerund (*Ip*) + Free Auxiliary (Auxiliary Verb)  
*V-Ip bil* [-CONV know], *V-Ip ver* [-CONV give], *V-Ip gel* [-CONV come],  
*V-Ip dur* [-CONV stop], *V-Ip kal* [-CONV remain]

Several criteria for differentiating syntactic from lexical compounds, such as passive, negation, light verb construction and wide scope interpretation, are summarized in Table 6.

**Table 6:** Syntactic criteria for the lexical-syntactic distinction

	Lexical compound verbs	Syntactic compound verbs
I. Passive in V1	<i>yap-i-ver-il-di.</i> [do-GER-give-PASS-PST] 'it was suddenly done.'	<i>yap-il-i ver-di.</i> [do-PASS-GER give-PST] 'it was suddenly done.'
II. Negation in V1	<i>yap-i-ver-me-di.</i> [do-GER-give-NEG-PST] 'not suddenly do it.'	<i>yap-ma-yı ver-di.</i> [do-NEG-GER give-PST] 'suddenly not to do it.'
III. LVC in V1	<i>*telefon ed-e dur-</i> [telephone do-GER stop] 'keep on calling'	<i>telefon ed-ip dur-</i> [telephone do-CONV stop] 'keep on calling'
IV. Wide Scope Operator	<i>*gel-e gör-sün.</i> [come-GER see-OPT] 'let him come and see'	<i>gel-ip gör-sün.</i> [come-CONV see-OPT] 'let him come and see'

Although V1-GER +V2 compounds share “word” status as stated in Section 3.3, the availability or unavailability of passives and negation, and the unavailability of syntactic elements or wide scope interpretation shown in Table 6 demonstrates that two distinct classes, syntactic and lexical, should be distinguished among V1-GER +V2 compounds, in line with a similar proposal by Kageyama (1989) for Japanese. Further evidence to support the syntactic nature of some V1-GER+V2 compounding and the lexical nature of V1-CONV+V2 compounding, which are introduced as syntactic complexes in this section, will be discussed at length in Section 4.

## 4 Similarities and Differences between Japanese and Turkish

This section compares V-V complexes in Japanese and Turkish with discussion on the similarities and differences between them.

### 4.1 V-V complexes in Turkish

As mentioned in Section 3.1, Verb (V1) + Verb (V2) complexes and compounds in Turkish take the following forms: Verb-gerund (*A(a~e)* or *I(i~ı~u~ü)*) + Auxiliary Verb and Verb-converb *I(i~ı~u~ü)p* + Auxiliary Verb. (12) represents same-subject subordination in which the subordinate clause is completely dependent on the main clause. In this case, the subject of the subordinate clause is also that of the main clause, and no elements can intervene between the converb and main verb.

- (12) *Ali kitap al-ıp gel-di.*  
 Ali book take-CONV come-PST  
 ‘Ali brought a book.’

Further developments in subordination can be found in Turkish affixation originating from the V1-GER+V compound in Turkish. The progressive suffix *-yor* is derived from gerund-A plus the obsolete form *yorı-* meaning ‘go, walk’ (Lewis 1991: 108): *yaz-a yorı-* [write-GER walk-] > *yaz-ıyor* [write-PROG ‘writing’]. This example represents the development from V1-gerund+V2 compound to grammatical affixation.

### 4.2 Syntactic nature of V-V complexes and compounds

In this section, Turkish V-V complexes and compounds are examined with respect to whether they are syntactically formed or not. The properties of Turkish verbal compounding will be explicated and contrasted with Japanese V-V compounds. The syntactically formed V-V complexes introduced here and their relation to compound verbs have not been examined by traditional grammarians of Turkish (Ergin 1985; Lewis 1991; Göksel and Kerslake 2005). The V-V complexes that will be discussed are regarded as syntactic compounds because the head verb selects a syntactic clause as its complement and several diagnostic tests, which will be introduced here, can be applied. It should be noted that some of compound verbs shown in this section have not been classified as instances of verbal compounding in traditional grammar (e.g. the infinitival double passive (IDP), exemplified in (13)). In the theory of George and Kornfilt (1977), this construction is considered to obtain by a type of compounding between V1 and V2.

- (13) a. *Dün bu viski yazar-lar tarafından*  
 yesterday this whisky author-PL by  
*iç-il-meğ-e çalış-ıl-dı.* (Infinitival double passive)  
 [V1-pass-INF-DAT] [V2-pass-TNS]  
 drink-PASS-INF-DAT work-PASS-PST  
 'Yesterday, this whisky was tried to drink by authors.' George and Kornfilt (1977)
- b. *Dün yazar-lar bu viski-yi*  
 yesterday author-PL this whisky-ACC  
*iç-meğ-e çalış-tı.* (Active counterpart of the IDP in 13a)  
 [V1-INF-DAT] [V2-TNS]  
 drink-INF-DAT work-PST  
 'Yesterday, the authors tried to drink this whisky.'
- c. \**Dün yazar-lar bu viski-yi*  
 yesterday author-PL this whisky-ACC  
*iç-ir-meğ-e çalış-tır-dı.* (Infinitival double causative)  
 drink-CAUS-INF-DAT work-CAUS-PST  
 'Yesterday, the authors tried to make someone drink this whisky.'

If a sentence with an infinitive clause such as (13b) is passivized, the infinitive verb of the subordinate clause, as well as main verb, will obligatorily take the passive morpheme. This double marking of the passive can be observed in both the verb (V2) and the subordinate verb (V1) in (13a). The compounding of V1+V2 is supported by the fact that no additional morphological material (such as an adverb) may intervene between V1 and V2. Even though the infinitival double passive is accepted and the compounding of V1+V2 occurs at a syntactic level, curiously, the infinitival double causative marking is not allowed as shown by the ungrammaticality of (13c).

To demonstrate that these V-V complexes are syntactically formed, I propose the following diagnostic tests to determine whether a given complex instantiates lexical or syntactic compounding: (i) particle insertion, (ii) passive suffix on V1 and V2, (iii) negative suffix on V1 and V2, (iv) personal suffix on V1, (v) wide operator scope (Johanson 1995), and (vi) reduplication of V1. Among these diagnostic tests, (ii) and (iii) are relevant to the structure of complementation. The others are relevant to the status of the V-V as a looser unit compared to the lexical V-V compounds. Particle insertion is the simplest and most common means of evaluating the morphological integrity of the verbal complex. Generally, no element is allowed inside a word unit. In Turkish, some exceptions occur if a given compound is formed syntactically. As previously mentioned in the discussion of Section 3-2, Turkish *-ebil-* is a potential suffix grammaticalized from the complex V1-GER(e) +V2(*bil-*), 'know'. Curiously, a focus particle, such as *de* ('also') can be inserted into this grammaticalized form,

only if stress is on the preceding negative suffix. Otherwise, emphasis is generally on the verb.

Particle insertion

(14) *O gel-me-ye-de-bil-ir-di.*

s/he come-NEG-GER-DE(also)-know-AOR-PST

‘S/he will not come.’

(Stress on negation) Öztürk (2005: 61)

Such particle insertion is not limited to the V-V complex. While a lexically derived N+V compound like *kaybet-* [loss do] ‘lose’ cannot allow particle insertion, a syntactically derived N+V compound like *kitap oku-* [book read-] ‘book reading’ also exhibits the property of allowing particle insertion (cf. Kuribayashi 1990). Subsequent discussion concerns occurrences of suffixes on V1 and V2. The examples in (15) and (18) demonstrate the minimal contrasts of headedness in V1+V2 complexes. Although the V2s in (15a) and (18a) bear a passive and a negative suffix respectively, reflecting head finality, the V1s bear the passive and the negative suffix in (15b) and (18b), respectively, which reflects a semantic difference between the two sentences. Syntactically derived verbal complexes have a bi-clausal character because the main and complement clauses are separated by a VP (cf. Kageyama 2016: 286). This assumption predicts that the V1 may bear the voice suffix or negative suffix inside V1-V2 complexes. On the other hand, the voice suffix or negative suffix on V2 is considered to be a result of lexical compounding of V1-V2, resulting in a mono-clausal structure of V1-V2. In other words, the V1-V2 has a dual membership in both complement types: bi-clausal or mono-clausal.

Passive suffix on V1 and V2

(15) a. *Köprü 3 gün-de yap-ıl-ı-ver-di.*

bridge 3 day-LOC do-PASS-GER-give-PST

‘Immediately, the bridge was repaired for three days’.

b. *Köprü 3 gün-de yap-ı-ver-il-di.*

bridge 3 day-LOC do-GER-give-PASS-PST

‘The bridge was repaired immediately for three days’.

Example (15a) means that the repair work on the bridge is emphasized, where the implied agent’s action is limited to the repairing act denoted by V1. On the other hand, the example in (15b), reflecting the mono-clausal structure, conveys that the implied agent’s quick work of repairing the bridge is emphasized. This semantic difference between the passive on V1 and the passive on V2 has its syntactic reflections in (15a) and (15b). These observations indicate that the bi-clausal structure must be identified in V1-PASS-GER-V2 compounds, contrary to the mono-clausal structure of V1-GER-V2-PASS compounds, resulted from lexical compounding of V1-V2. A passive suffix on V1 and V2 with a by-phrase is also possible, representing a type of personal passivization.

Passive suffix on V1 and V2 with by-phrase

- (16) a. *Köprü işçi-ler tarafından 3 gün-de yap-ıl-ı-ver-di.*  
 bridge worker-PL by 3 day-LOC do-PASS-GER-give-PST  
 ‘Immediately, the bridge was repaired by workers for three days.’  
 b. *Köprü işçi-ler tarafından 3 gün-de yap-ı-ver-il-di.*  
 bridge worker-PL by 3 day-LOC do-GER-give-PASS-PST  
 ‘The bridge was repaired immediately by workers for three days.’

A double passive on V1 and V2 is not possible in converb structures like V1-CONV+V2. This also indicates that the double passive is limited to infinitival clauses as in IDP.

- (17) a. *\*Köprü 3 gün-de yap-ıl-ıp ver-il-di.*  
 bridge 3 day-LOC do-PASS-CONV give-PASS-PST  
 ‘The bridge was repaired immediately by workers for three days.’  
 b. *\*Köprü 3 gün-de işçi-ler tarafından yap-ıl-ıp ver-il-di.*  
 bridge 3 day-LOC worker-PL by do-PASS-CONV give-PASS-PST  
 ‘The bridge was repaired immediately by workers for three days.’

The examples in (18) concern the scope of negation.

Negative suffix on V1 and V2

- (18) a. *Çarşı-ya kadar niçin gid-i ver-me-di?*  
 market-DAT until why go-GER give-NEG-PST  
 ‘Why did he not dash as far as the market?’  
 b. *Çarşı-ya kadar niçin git-me-yi ver-di?*  
 market-DAT until why go-NEG-GER give-PST  
 ‘Why has he suddenly stopped going as far as the market?’

Lewis (1991: 192)

In (30a), the scope of negation is limited to the aspectual auxiliary verb V2, negating only the aspectuality; in (30b), the scope of negation applies to the main verb V1, resulting in negation of the entire proposition. With respect to the complement structure, the negative suffix in V1 reflects the bi-clausal nature of the sentence. The occurrence of a negative suffix on V2 must be a consequence of compounding. Another possibility is that V1-V2 has a dual membership in both complement types, as in the case of the discussion of passive suffix on V1 or V2. Furthermore, lexically derived V-V complexes do not allow any insertion into any part of the word unit. Hence, the occurrence of the negative suffix on V1 demonstrates the syntactic derivation of the V1+V2 complex.

Further evidence for the syntactic nature of V1-V2 complex comes from the occurrence of the personal suffix on V1. Generally, the personal or number suffix is the rightmost element in a Turkish tensed predicate. In colloquial speech, V1 must bear the personal suffix in V1-tense -V2-tense complex (V2: non-physical movement), which shows the syntactic nature of the complex verb on a par with the voice suffix or negative suffix inside V1-V2 complexes.

#### Personal suffix on V1

- (19) a. *Her şey-im-i sat-tı-m git-ti.*  
 every thing-POSS.1SG-ACC sell-PST-1SG go-PST  
 ‘I sold everything I had.’ Koç (1990)
- b. \**Her şey-im-i sat-tı git-ti-m.*  
 every thing-POSS.1SG-ACC sell-PST go-PST-1SG
- c. \**Her şey-im-i sat-tı-m dün git-ti.*  
 every thing-POSS.1SG-ACC sell-PST-1SG yesterday go-PST  
 ‘Yesterday, I sold everything I had.’

While V1 *sat-* ‘sell’ bears the first-person-singular suffix in (19a), the first-person-singular suffix on V2 is ungrammatical, as seen in (19b). No element can intervene between V1-tense and V2-tense, showing “word” status of V1-V2 complex as shown in (19c).

Operator scope is also relevant for confirming the syntactic nature of the V-V complex. In (20a), V1 *gel-* ‘come’ and its converb form share a modal operator with V2 *gör* ‘see’. Thus, both V1 and V2 share the optative meaning, even though V1 takes no optative suffix. The reduplicated intensive form of V1 found in colloquial speech in (20b) also supports the syntactic nature of the V1-V2 formation.

- (20) a. *Gel-ip gör-sün.*  
 come-CONV see-OPT  
 ‘Let him come and see’ Johanson (1995: 323)
- b. *Köprü çök-ü çök-ü ver-di.*  
 bridge break down-GER break down-GER give-PST  
 ‘The bridge suddenly broke down.’ Lewis (1991: 192)

Ordering restrictions also attest to the validity of the lexical-syntactic distinction. Syntactic compounding, such as the light verb construction (*telefon et-*) can feed syntactically formed *-ip* + V2 compounding; however, lexical compounding such as *-GER* + V2 cannot be fed by a syntactically formed V1 (see Kuribayashi 2010 for the syntactic nature of Turkish light verb constructions).

- (21) a. [[syntactic]-syntactic]      b. \*[[syntactic]-lexical]  
*telefon ed-ip dur-*      \**telefon ed-e dur-*  
 [telephon do-CONV stop]      [telephon do-GER stop]  
 ‘keep on calling’      ‘keep on calling’

Thus, we can conclude that some Turkish V1+V2 complexes have both syntactic and lexical properties. Table 7 summarizes the findings.

**Table 7:** Summary of tests for V-V compounds

	lexical nature	syntactic nature
Particle Insertion (-abil-)		✓
Negation on V1 (V1-ger V2)		✓
V2 (V1-ger V2)	✓	
Personal suffix on V1 (V1-TNS V2-TNS)		✓
Wide Scope Operator (V1-conv V2)		✓
Reduplication of V1 (V1-ger V2)		✓
Ordering restriction on V1		
(V1-conv V2)		✓
(V1-ger V2)	✓	
Passive on V1 (V1-conv V2)		✓
V2 (V1-conv V2)	✓	

### 4.3 Similarities and differences

Table 8 summarizes the morphological forms of V1 verbs in Turkish compound verbs.

**Table 8:** Summary of Turkish verbal complexes and compounds

Types	Morphological shape of V1 suffix	Wordhood	Syntactic properties	Semantic properties of V2
V1-mAK-A+V2	infinitive	✓	V1-pass+V2-pass V1-part-V2	aspectual
V1-lp+V2	converb	✓	V1-part-V2 LVC in V1 wide scope of V2 V1-pass+V2 V1-neg+V2	aspectual
V1-A+V2	gerund	✓	V1-part+V2 V1-pass+V2 V1-neg+V2 V1(reduplicated)+V2	aspectual/modality
V1-TNS+V2-TNS	tensed	✓	V1-pers+V2	aspectual/modality

Table 8 should be compared with Table 9, a brief summary of Japanese compound and complex verbs (cf. Section 2).

**Table 9:** Summary of Japanese verbal complexes and compounds (adapted from Kageyama 2016)

Types	Morphological shape of V1 suffix	Wordhood	Syntactic test	Semantic property of V2
V1- <i>te</i> +V2	converb	✓	syntactic	aspectual, non-physical movement, 12 types of V2
V1-INF+V2	gerund	✓	syntactic lexical	aspectual, 30 types of V2 thematic/aspectual

Both Turkish and Japanese have V-V concatenations that can be attributed to predicate final syntax. The morphological shapes of V1-*te* form in Japanese and V1-*Ip*- converb in Turkish are functionally comparable. The V1-infinitive form in Japanese and V1-A gerund form in Turkish are also morphologically and functionally similar to each other. Turkish V1-*mAK-A*+V2 and V1-*tense*+V2-*tense* compounds are marginal types that do not have corresponding Japanese forms. As in the case of V1-*te* V2 complexes, in which Japanese -*te* is a hallmark of syntactic formation (cf. Nakatani 2016), it is reasonable to assume that -*Ip* in V1-*Ip* V2 is also a hallmark of syntactically complex predicates in Turkish. However, the result of Turkish V1-*Ip*+V2 compounding, which is required to obey the adjacency requirement between V1 and V2, has a “word” status as in the case of Japanese V1-*te*+V2 complex, which also have “word” status. All of the examples of V1+V2 compounding of Turkish examined in this section have “word” status and are syntactic in nature, interacting with syntactic rules. The semantic types of V-V are rather limited in Turkish, as opposed to Japanese V1+V2 lexical compounding, which allows for miscellaneous semantic relations. The V2s of Japanese syntactic compounding are also limited to aspectual expression, a common property of the compounding process that interacts with syntax in both Japanese and Turkish.

All of these remarkable properties of syntactically formed compounds lead to the conclusion that the productive formation of compound and complex verbs in Turkish is associated almost exclusively with syntactic structures whereas that in Japanese is closely linked with both morphological/lexical and syntactic structures. As for the semantic relation of lexical V-V compound verbs, it shows remarkable differences between lexical aspectual compound verbs in Japanese and Turkish. While Turkish has no lexical compound verbs, the grammaticalization of the verbs in V2 has resulted in miscellaneous semantic relationships between V1 and V2 in lexical compound verbs in Japanese. Syntactic compound verbs in Japanese are classified semantically as inception, duration, completion, incompleteness, excessiveness, retrial, repetition, reciprocity, and likelihood, etc. Turkish syntactic compound verbs also have “phasal” meaning denoting grammatical aspects, but types of aspect



are restricted: inception, duration, completion, incompleteness. On the contrary, the formula for the complex verbs in Japanese (‘V1-*te* V2’) correspond to ‘V1-*Ip* V2’ in Turkish because of the semantic relationships that occur between the two events in V1 and V2 in both languages (the temporal sequence in which V1’s event takes place is prior to or simultaneous with V2’s event). Both Turkish and Japanese have aspectual, attitudinal, and benefactive meaning in common in de-lexicalized V2, which may be called “phasal verbs”.

## 5 Conclusion

As mentioned in the introduction, the aim of this chapter is to explore the following problem: (i) to investigate the V-V complexes (complex verbs and compound verbs) in Turkish seeking adequate criteria for classification, and (ii) to provide a novel classification for V-V complexes in Turkish making use of a contrastive perspective from Japanese. The V-V compounding in Turkish surveyed so far and the mutual relationships are summarized in Table 10. We draw a major division between lexical and syntactic compound verbs. Syntactic compound verbs are divided into two subclasses, depending on their structures. V2s in lexical compounding and V-*Ip*-V compounding have undergone desemanticization while V1s maintain their original meanings. Compared to Japanese V-V compounding (see Table 9), Turkish V-V is a rather simple instance of lexical compounding. On the other hand, syntactic compounding plays a vital role interacting with morphosyntactic properties in Turkish. This result might be attributed to the poverty of lexical V-V compounding in Turkish. For example, Turkish has around eight types of V1+V2 compounds: V-*a* *bil* [-GER be able] Possibility, V-*Ip* *ver* [-CONV give], V-*i* *ver* [-GER give] Swiftness, V-*Ip* *gel* [-CONV come], V-*a* *gel* [-GER come] Habit, V-*Ip* *dur* [-CONV stop], V-*a* *dur* [-GER stop] Continuity, V-*Ip* *kal* [-CONV remain], V-*a* *kal* [-GER remain] Continuity, while Japanese has about 2,750 lexical compound verbs (cf. Kageyama and Kanzaki 2014). Viewed another way, our contrastive study of Turkish V-V compound exposes the remarkable property of richness of Japanese lexical V-V compound.

**Table 10:** Mutual relationships among V-V compound verbs in Turkish

		lexical/syntactic	syntactic	
Class		V-GER-V	V- <i>Ip</i> -V	V-INF-V
i.	Structure	left-to-right modification	left-to-right modification	complementation
ii.	Meaning	aspectual	aspectual	aspectual
iii.	Desemanticization	V2	V2	
iv.	Hierarchical relation	lowest ←————→ highest		

Employing the notion provided by Japanese V-V compounding (Kageyama 2016), we have demonstrated that types of V-V compounding are the result of the interaction among common features of Turkish and Japanese. Namely, properties of the syntactic compounding and the lexical compounding processes, most of which are shared by both Japanese and Turkish, must be considered extensively. Needless to say, further elaboration is needed to explicate the structure of syntactic compounding in Turkish. Most Altaic-type languages (Kamei, Kōno and Chino [eds.] 1995), including Turkic languages, also carry properties similar to those of Turkish. In particular, the restrictions on V-V compounding are relaxed in Turkic languages in central Asia. Thus, we can contribute to the exploration of the essential characteristics of Japanese by investigating other Altaic-type languages, including other Turkic languages.

## Additional abbreviations

ANT – anti-causative; AOR – aorist; CONV – converb; TNS – tense

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## 8 Ainu complex predicates with reference to Japanese

### 1 Introduction

Ainu, an endangered language in Japan, has long been spoken while receiving influence from Japanese. Although the two languages have apparent similarities in phonological systems, basic constituent order, and some analytic grammatical constructions, on a deeper level they are structurally very different, as indicated by such properties of Ainu as pronominal verbal marking, no case marking on arguments, mixed alignment, head-marking possessive construction, no tense marking, a great number of coded valency alternations including applicatives – all of which are foreign to Japanese.

In this chapter, I will focus on an Ainu construction ‘V1 conjunction *wa* V2’, which is a rough syntactic equivalent of the *-te* converbal complex predicate construction in Japanese (e.g. *tabe-te miru* ‘try eating’, lit. ‘eat and see’). In both languages two verbs connected by a linker just work together. Though the two constructions, henceforth also referred to as ‘complex predicates’ or ‘complexes’, are not the same structurally, their meanings look superficially similar. I am going to show that they have developed under contact, more specifically, via the strong influence of Japanese on Ainu.

After a few introductory Sections 2 and 3, I will look at syntactic and semantic features of complex predicates in Ainu comparing them to those of Japanese. My goal is to determine to what extent two verbs function as a single predicate syntactically (Section 4) and semantically (Section 5), i.e. to measure the degree of grammaticalization of the respective constructions. And finally, in Sections 6 and 7, I will provide the details of interaction with Japanese in the formation of complex predicates in Hokkaido Ainu and adduce several different scenarios depending on a particular complex predicate type.

### 2 Ainu: Sociolinguistic situation and basic properties

Ainu (isolate) is a critically endangered language for which no field work is any longer possible. It consists of three major dialects: Hokkaido, Sakhalin, and Kuril Ainu. Hokkaido Ainu dialects are divided into southwestern and northeastern groups. This chapter will use data of the southern branch of southwestern dialects of Saru

and Chitose mainly from fieldwork materials of Hiroshi Nakagawa and Anna Bugaeva, and those of other researchers (T1-T6: Tamura 1984-89). A token frequency search in Table 2 is based on the K corpus *A glossed audio corpus of Ainu folklore* (44,717 words, 7 hours).

Ainu is agglutinating, polysynthetic, incorporating, and head-marking. It is more prefixing than suffixing. The basic word order is SOV. Core arguments are not marked for case. Adjuncts are marked by case postpositions. The verb is obligatorily marked for the person and number of S/A/O; 3rd person is zero. Alignment is mixed, i.e. tripartite, nominative-accusative, and neutral, depending on the person/number. ‘Indefinite person’ is a label employed for a number of historically related functions: indefinite (=impersonal passive), 1PL.INC, 2SG/PL honorific, and logophoric, the latter is conventionalized as the protagonist’s person in folktales. The opposition of transitive and intransitive verbs is clear-cut (in tripartite alignment). Intransitive verbs without personal marking can also function as nouns, e.g. *uwepeker* i. ‘to tell a folktale’, ii. ‘a folktale’. A considerable number of verbs, both intransitive and transitive, employ different stems/suffixes for SG and PL. Ainu lacks any kind of special subordinate morphology on verbs but has a number of aspectual, modal, and evidential auxiliaries/particles, though no pure tense markers. Ainu has an extensive voice system.

### 3 *V1 wa V2* complexes in Ainu: An overview

I will discuss the synchronic behavior of *V1 wa V2* complexes in Ainu in terms of diachronic change. I will also try to contrast them with the equivalent *-te* converb complexes in Japanese, which they are similar with in terms of the following meanings brought in by *V2*; the symbol “?” indicates rough equivalents:

- |              |  |
|--------------|--|
| Aspectual:   | 1) stative resultative <i>wa an/oka</i> EXIST sg/pl, cf. J ?- <i>te aru</i> , ?- <i>te iru</i> ;<br>2) perfective <i>wa isam</i> DISAPPEAR, cf. J ?- <i>te simau</i> ;<br>3) completive <i>wa okere</i> FINISH, cf. J ?- <i>te simau</i> (and - <i>si-owaru</i> ); |
| Deictic:     | 4) directional: to speaker/completive <i>wa ek/arki</i> COME sg/pl,<br>cf. J - <i>te kuru</i> ;<br>5) directional: from speaker/inchoative <i>wa arpa/paye</i> GO sg/pl,<br>cf. J - <i>te iku</i> ;  |
| Benefactive  | 6) benefactive <i>wa kor-e</i> GIVE, cf. J - <i>te kureru</i> ;  |
| Attitudinal: | 7) preparatory <i>wa anu/ari</i> PUT sg/pl, cf. J - <i>te oku</i> ;<br>8) tentative <i>wa inkar</i> SEE, cf. J - <i>te miru</i> ;<br>9) tentative <i>wa inu</i> HEAR, no J equivalent.   |

There are no specialized works on this topic in Ainu though it is mentioned in most grammars of Ainu (Kindaichi (1993 [1931]: 298–299); Chiri (1974 [1936]: 127); Refsing

(1986: 193–195, 200–203); Tamura (1988/2000); Bugaeva (2004: 60–69); Satō (2008: 87–89)). In Japanese, *V-te* V complex predicates have been a focus of linguistic research for several decades (Kageyama 1993, 1999; Shibatani 1994, 2007, 2009; Falsgraf and Park 1994; Matsumoto 1996, see overview in Nakatani 2016).

Unlike Japanese (1b), both V1 and V2 in Ainu are finite (non-converbal) and thus marked for the person and number of the subject (and object) as in (1a). V1 is selected from an open class of verbs, V2 – from a closed class of 9 verbs, viz. intransitive EXIST, DISAPPEAR, COME, GO, SEE, HEAR and transitive GIVE, PUT, FINISH. Only V2 HEAR totally lacks an equivalent in Japanese.

- (1) a. *Ku-ye wa k-ánu.* Ainu  
1SG.A-say and 1SG.A-PUT.SG
- b. *Watashi ga it-te oi-ta.* Japanese  
I NOM say-CNV PUT-PST  
'I told (him something) for his future use.' (T 73)

Normally, in affirmative sentences, V1 and V2 are linked by a coordinating/subordinating conjunction ***wa*** 'and', but in negative sentences of the V2 EXIST type, a subordinating conjunction ***no*** 'with/and' is used instead (Section 4.6).

The issue of coordination vs. subordination proper has not been discussed in Ainu studies so far. Refsing (1986: 239) notes that "*wa* is the most frequent of the coordinative conjunctualizers", which "connects two actions, states, or events by just enumerating them without stressing one over the other". Tamura (2000: 149) points out that "it is the most unmarked conjunctive particle, and is used in various situations" including not just pure coordination (2) but also those with temporal (3a) and causal (3b) relationships and methods of moving.

- (2) *U-pak-no oka wa sattek kus oka wa*  
REC-till-ADV exist.PL and be.thin reason exist.PL and  
*oraun nepki kor u-kasuy nepki.*  
then work when REC-help work  
'They are thin, about the same size, and when they work, they help each other.'  
(a riddle about a pair of chopsticks) (T-E 151)
- (3) a. *Otcike huraye wa pir-pa.*  
tray wash and wipe-PL  
'Wash and wipe the tray(s).' (T-E 149)
- b. *K-ukao oyra wa rurikan.*  
1SG.A-put.away forget and become.damp  
'I forgot to put (the laundry) away, and it has become damp.' (T-E 149)

Although, of all Ainu conjunctions, *wa* ‘and’ has the strongest bias towards coordination (therefore referred to as ‘coordination’), unambiguous examples of coordination are few. After all, *wa* ‘and’ is not used for noun phrase coordination. The scale of coordinateness adduced in Foley and Van Valin (1984) will be helpful for solving this problem: *wa* ‘and’ should be best characterized as a conjunction of coordination and subordination, as compared with the Japanese *-te* forms, which are used for subordination and coordination (Alpatov and Podlesskaya 1995: 473).

Generally, *V1 conj ‘and’ V2* complexes originating in a type of coordination, which are also referred to as pseudocoordination, e.g. English *go and get*, where a coordinate form displays subordinate properties, are found in several unrelated language groups (Indo-European, Semitic, Khoisan, and Austronesian languages). However, they are very rare in verb-final (SOV) languages like Ainu, since those languages typically utilize for this purpose a type of subordination as *-te* in Japanese (Ross 2016: 228).

In Ainu, *V1 wa V2* co-exists along with the respective coordinating construction and, in fact, it is sometimes difficult to distinguish between the two, e.g. out of context *ekimne wa inkar* can mean either ‘he tried going to the mountains’ (*V1 wa V2 SEE*) or ‘he went to the mountains and looked around’ (coordination). Grammaticalized interpretations are triggered by ‘semantically incongruous contexts’ (Shibatani 2007: 130), i.e. cases without direct semantic correlation between *V1* and *V2*; the degree of grammaticalization varies considerably in particular *V2* types (to be discussed in Section 5).

The most apparent grammatical difference between *V1 wa V2* and coordination is that in the former the two verbs must be adjacent (adjacency requirement) as in (1), while the coordinating construction can optionally include the object/adjunct before *V2*, just like its equivalent *-te* converbal construction in Japanese. Also, in coordination, there is often (but not necessarily) a pause after *wa* ‘and’, while in *V1 wa V2*, both verbs are part of a single intonation contour.

- (4) *Sinna cise a-kar wa, or-o ta a-anu yak pirka.*  
 separate house IND.A-make and place-POSS LOC IND.A-put.SG if good  
 ‘You [polite] may build a separate house and put (her) there.’  
 (K7803233UP.376)

More than one verb may appear in *V1* and *V2* positions of *V1 wa V2*, but the combinability of various *V2*s is rather limited (5).

- (5) *Kotan imak ta kor wa paye wa ari pa.*  
 village back LOC have and GO.PL and PUT.PL PLA  
 ‘They took the dishes to the back of the village (for a future use).’  
 (K8010281UP)



An important aspect of discussions on V-V complexes is their wordhood. As is well known, *V-te V* complex predicates in Japanese do not form morphological words but behave as words phonologically and syntactically (Kageyama 1999: 317). In fact, *V1 wa V2* in Ainu shows even fewer wordhood properties: it does not consist of a single word either morphologically or phonologically (both *V1* and *V2* are accented).

The question of syntactic wordhood, i.e. whether *V1* and *V2* form a single predicate of a monoclausal construction, is a question for Ainu too. This is the so-called clause fusion which is “a diachronic process in which a biclausal surface structure becomes a monoclausal surface structure” (Harris and Cambell 1995: 172). Clause fusion is very common as a process of forming complex predicates and, in the next section, I will show to what extent this applies to Ainu.

## 4 Syntactic features of *V1 wa V2* complexes: one predicate or two?

To show whether *V1 wa V2* complexes consist of one predicate (monoclausal) or two (biclausal) I will try to apply a few well-known tests, which proved to be effective for the analysis of Japanese in Kageyama (1993), Falsgraf and Park (1994), and Matsumoto (1996). Ideally, just like in Japanese, a complex with each particular *V2* should be considered separately because of its varying syntactic behavior so, in fact, we should end up with several *V1 wa V2* complexes showing different degrees of grammaticalization from the respective biclausal constructions. However, it is impossible to be equally consistent in the research of Ainu since fieldwork is no longer possible and all we are left with are texts. Thus for now, I will view all *V1 wa V2* as one and try to distinguish between different types where possible. My judgments are based on corpora only, so “possible” means ‘attested’ and “impossible” – ‘unattested’.

### 4.1 Verbal indexing

As mentioned, the verb in Ainu is obligatorily marked for the person and number of S/A/O, which is often referred to as ‘indexing’; 3rd person is zero. Importantly, in *V1 wa V2*, each verb is indexed separately, which can be regarded as a biclausal feature.

- (6) *Eun arpa-an h\_i ka a-erampewtek wa*  
 where.to go.SG-IND.S NR even/also IND.A-not.know and  
*a-tére wa an-an.*  
 IND.A-wait and EXIST.SG-IND.S  
 ‘I didn’t know where to go, so I was waiting.’ (K8007292UP.108)

## 4.2 Subject sharing

In most *V1 wa V2* types, both verbs share the same subject (SS requirement). However, *V1 wa V2:EXIST* and *V1 wa V2:DISAPPEAR* types can allow different subjects, i.e. the object of *V1* being the subject of *V2*, which is the so-called object sharing pattern abundantly available in serialization (Aikhenvald and Dixon (2006); Shibatani (2009)).

- (7) a. *Konto su anak a-nuyna wa an pe ne.*  
 then pan TOP IND.A-hide and EXIST.SG (3rd pers. S) NR COP  
 ‘Then a pan was also hidden.’ lit. ‘someone hid it and it was.’  
 (K8007292UP.091)
- b. *Opitta a-tuye wa a-ray-ke wa isam.*  
 all IND.A-cut and IND.A-die-CAUS and DISAPPEAR (3rd pers. S)  
 ‘We cut and killed them all.’ lit. ‘we killed them and they disappeared.’  
 (AB 115)

In Japanese, some *V-te V* complexes do not respect subject sharing either, e.g. *V-te aru* EXIST (inanimate) ‘have...-ed’ (resultative), *V-te morau/itadaku* BE.GIVEN ‘be given/do (to speaker)’, and *V-te hosii* WANT ‘want sb do for speaker’ (Nakatani 2016).

## 4.3 Expression of plurality

In Ainu, verbs of certain semantic groups show number distinction, which is realized in the use of completely different verbal stems (suppletion) for singular/plural (8a,b) or suffixes, viz *-n/-p* (8c) and *-V/-pa* (8d).

- (8) a. *arpa* ‘go.SG’ – *paye* ‘go.PL’ (vi)  
 b. *rayke* ‘kill.SG’ – *ronnu* ‘kill.PL’ (vt)  
 c. *ahu-n* ‘enter.SG’ – *ahu-p* ‘enter.PL’ (vi)  
 d. *hopun-i* ‘get up.SG’ – *hopun-pa* ‘get up.PL’ (vi)

In the case of intransitive verbs (vi), number distinction refers to the number of subject referents (S) and is obligatory, and in the case of transitive verbs (vt), to the number of object referents (O) and is less obligatory, i.e. more semantic, cf. *arpa* ‘(one person) go(es)’ – *paye* ‘(people) go’ and *rayke* ‘kill (one bear)’ – *ronnu* ‘kill (many bears)’.

Out of nine *V2*s participating in *V1 wa V2*, five verbs show number distinction, viz. *an/oka* EXIST sg/pl (vi), *ek/arki* COME sg/pl (vi), *arpa/paye* GO sg/pl (vi), *anu/ari* PUT sg/pl (vt), and *okere/okerpa* FINISH sg/pl (vt). Intransitive *V2*s strictly main-

tain number distinction even in *V1 wa V2*, and when *V1* is a verb with number distinction (9a), it is marked for plurality separately (cf. *V1* without number distinction in (9b)), which is an indication of biclausality.

- (9) a. *Suy a-uni ta hosip-pa-an \_wa arki-an.*  
 again IND.A-house.POSS LOC return-PL-IND.S and COME.PL-IND.S  
 ‘We came back to my home again.’ (AB 225)
- b. *A-tura wa arki-an.*  
 IND.A-follow and COME.PL-IND.S  
 ‘We returned together.’ (K7803233UP.088)

#### 4.4 Subject honorification

According to Kindaichi (1993 [1931]: 222), plural forms of verbs with number distinction can also be used for subject honorification. In *V1 wa V2*, each of such verbs separately becomes the target of S honorification by pluralization, which is another piece of evidence supporting biclausality.

- (10) *A-kor yup-i ya-p wa arki.*  
 IND.A-have older.brother-POSS land-PL and COME.PL  
 ‘My darling has got up on the bank.’ (K7807151KY.144-5)

#### 4.5 Expression of TAM and evidentiality

Ainu has no pure tense markers, but it has post-verbal aspectual, modal, and evidential markers. In *V1 wa V2*, all such markers can occur after *V2* (11), and scope over both *V1* and *V2*, which, in fact, describe a single event.

- (11) *At-te wa an a p ne awa, hat*  
 attach-CAUS and EXIST.SG PERF NR COP but grapevine  
*pon\_ saranip suwat or wa turse.*  
 little basket hook place ABL fall.down  
 ‘She has hung it up, but the little grapevine basket fell from the hook.’  
 (K7803233UP)

There are TAM markers of both verbal origin, e.g. perfect *a* (11), pluractional *pa* (12), dubitative/probability *nankor* (13) and admirative *aan* (18), and nominal origin, e.g. assertive *pe* (< ‘thing’) *ne* as in (7a) and (18) and intentional *kusu* (< ?‘reason’) *ne*. The latter type, in addition to the erstwhile noun includes the copula *ne* ‘(be)come’ and is structurally similar to the Japanese *no da* construction.

- (12) *Kes to an kor cikap-po ne ya isepo ne ya ronnu*  
 every day exist when bird-DIM COP Q hare COP Q kill.PL  
*wa arki pa.*  
 and COME.PL PLA

‘They went to the mountains every day and caught small birds and rabbits.’  
 (K7803231UP.028)

- (13) *Pa ani a-ronnu wa isam nankor.*  
 infectious.disease INST IND.A-kill.PL and DISAPPER probably  
 ‘(Your people) have probably been killed by an infectious disease.’ (T2 28)

Ainu has a rich evidential system. There are four markers, all originating in nouns, viz. inferential **ru-w-e** [trace-EP-POSS] (< ‘the trace of’) (27b), reportative **haw-e** [voice-POSS] (< ‘the voice of’), visual **sir-i** [sight-POSS] (< ‘the sight of’), and non-visual sensory **hum-i** [sound-POSS] (< ‘the sound of’) (14). In *V1 wa V2*, evidential markers can occur only after *V2*; in affirmative sentences (27b), (28), they are followed by the copula *ne* ‘be(come)’ as in some modal markers, cf. (7a) and (18).

- (14) *Ene an pe e-tura wa e-ek humi.*  
 like.this exist.SG NR 2SG.A-follow and 2SG.S-COME.SG NONVIS.EV  
 ‘(My stupid son), what you have brought back [an ugly woman who was completely covered in hair]! lit. ‘it is the sound of...’ (K8010291UP.225)

The fact that all the above TAM and evidentiality markers can occur only after *V2* scoping over both verbs speaks for monoclausality of the respective *V1 wa V2*s complexes. However, here too *V1 wa V2* EXIST behaves differently: a few modal/aspectual light verbs (“auxiliaries”), e.g. **niwkes** ‘cannot’, **oasi** ‘be about to do’, and occasionally even the pluractional particle **pa** ‘many times, regularly’ and iterative **a...a** occur in the post-*V1* position, in addition to the post-*V2* position.

- (15) *A-ak-ih i tura u-koyki-an wa*  
 IND.A-younger.brother-POSS COM REC-fight-IND.S and  
*u-ekot-an oasi wa oka-an.*  
 REC-die.of-IND.S be.about.to and EXIST.PL-IND.S  
 ‘My younger brother and I will fight against each other, and we are both going to die.’ (K8010281UP.078)
- (16) *A-sa anakne na a-e niwkes wa an.*  
 IND.A-older.sister TOP still IND.A-eat cannot/unfinished and EXIST.SG  
 ‘My sister was still half-eaten.’ (K8010311UP.134)

- (17) *INARI macittaro pa wa oka ya a-kopisi.*  
 Inari-god worship PLA and EXIST.PL Q IND.A-ask  
 ‘I asked them if they regularly worshipped Inari-god.’ (K8108012UP.080)

## 4.6 Expression of negation

Forming negative *V1 wa V2* complexes seems to be a problem because only one element, usually a verb or noun, can be focused in negation and apparently none of the *V1 wa V2* complexes has fully been reanalyzed as ‘one verb’, although in many respects two verbs work together. Negation in Ainu is formed with an adverbial particle **somo** which is placed before the verb, so for *V1 wa V2* we would expect *?somo kor wa ek* ‘he did not bring it’ (lit. ‘not have and not come), yet nothing of this kind is attested in texts.

On the other hand, there are ways to express negation by separating two verbs of *V1 wa V2*, but the respective examples are attested only with the *V1 wa V2* EXIST type, which also shows other specific biclausal properties (see Table 1 in Section 4.11). In (18), the negator *somo* is used before *V1* but there is no evidence that both verbs fall under its scope. On the contrary, the coordinating conjunction *wa* is obligatorily replaced with a subordinating conjunction *no* ‘with(out) doing; and’ which “generally follows negated predicates and stative verbs” (Refsing 1986: 241) and implies succession of events or a subsidiary status of the first event (Satō 2008: 45), therefore I assume that with negation the *V1 wa V2* EXIST complex turns into an unambiguously biclausal construction.

- (18) *Sirkometu anak-ne, somo mokor no an pe ne anan.*  
 (name) TOP-COP NEG sleep and EXIST.SG NR COP ADM  
 ‘It appeared that Sirkometu was not sleeping.’ lit. ‘existed without sleeping’  
 (T6 78)

Another strategy is emphatic negation involving zero nominalization of *V1* and negation of a light verb *ki* ‘do something’, which takes the nominalization as its object (19). In (19a), *ki* ‘do sth’ functions as *V1*, and the fact that it is not marked for person (it has a dummy 3rd person subject ‘it’) clearly shows that *V1* and *V2* do not share the same subject and the scope of negation does not extend to *V2*; the construction is biclausal.

There is also one example of emphatic negation with the *V2* GIVE type (19b). It is structurally similar to example (19a) involving zero nominalization and a light verb *ki* ‘do something’ but the negative particle *somo* and verb *ki* are placed after *V2*, which allows us to assume that negation scopes over both *V1* and *V2* functioning as one predicate. However, as all emphatic negation constructions involve zero nominalization regardless of the place of negation (after *V1* or *V2*), the issue in question is rather related to nominalization (see Section 4.7) than negation proper as in (18).

- (19) a. *Na hotke-an **somo** ki no an-an.*  
 more sleep-IND.S NEG do and EXIST.SG-IND.S  
 ‘I didn’t sleep more.’ lit. ‘It did not do more of my sleeping and I lived.’  
 (AB 245)
- b. *Nep ka e-sinot pe poka a-kar wa*  
 something even/also with.APPL-play NR only IND.A-make and  
*a-kor-e ka **somo** ki no ene oka-an.*  
 IND.A-have-CAUS(=GIVE) even/also NEG do and like.this exist.SG-IND.S  
 ‘We lived so that I just did not make for him any things to play with.’  
 (K8007291UP)

To summarize, none of the above biclausal negation strategies, neither negation proper (18) nor nominalization (19a), have been attested with *V1 wa V2* complexes other than *V2 EXIST*; apparently they resist decomposition into two verbs. Negating two verbs together as a monoclausal structure also seems problematic, cf. a negation strategy in (19b), so it is an open question whether other *V1 wa V2* complexes can be negated at all.

#### 4.7 Relativization and nominalization

*V1* and *V2* can form a single-headed relative clause construction (20) or nominalization as in (7a) and (18), which is not possible in coordination due to a violation of the coordinate structure constraint (Ross 1967).

- (20) [*Onne wa okere*] *cape ne pa.*  
 be.old and FINISH cat COP PLA  
 ‘(My grandmother) again transformed into a very old cat.’ (K7803233UP)

#### 4.8 Topicalization and focusing

There are both a topical particle *anak(ne)* and a focus particle *ka*. The focus particle *ka* can be used in subordination (21). None of the particles has been attested in *V1 wa V2* complexes, which speaks for their monoclausality.

- (21) *Somo ipe no ka ek!*  
 NEG eat and even/also come.SG  
 ‘No, come without eating.’ (T137)

## 4.9 Coordination

To my knowledge, only V2 EXIST passes the coordination test supporting biclausality. No other V2 has been attested in such syntactic environment.

- (22) [*Apa ka mak-ke*] [*puyar ka mak-ke*] *wa oka.*  
 door even/also open-ACAUS window even/also open-ACAUS and EXIST.PL  
 ‘The front door was open, and so were the windows.’ (K8109171UP.101)

## 4.10 Scope of adverbs

As a rule, in *V1 wa V2* complexes, adverbs occur before *V1* and scope over both verbs, which means that they constitute a single predicate of a monoclausal construction.

- (23) *Hanke-no kor wa ek wa i-nukar-e.*  
 close-ADV have and COME.SG and IND.O-see-CAUS  
 ‘Please bring it close so I can have a look.’ (K8010291UP.411)

- (24) *Pirka-no opusu wa inkar.*  
 good-ADV dig and SEE  
 ‘Try to dig well.’ (N9006031.FN)

However, in the case of V2 EXIST and V2 DISAPPEAR, adverbs *patek* ‘only’ and *oar* ‘completely’ have additionally been attested before V2s as in (25a) and (26a) (cf. also the pre-V1 use of adverbs in (25b) and (26b)), which means that they do not scope over both verbs; hence the construction in question behaves biclausally.

- (25) a. *Ru usi or-o karahup wa ray wa oar isam.*  
 melt place place-POSS get.into and die and completely DISAPPEAR  
 ‘They got into the place with melted ice and all of them died.’ (N 416)

- b. *Atuy oar sat wa isam.*  
 sea completely dry.up and DISAPPEAR  
 ‘The sea dried up completely.’ (AB 339)

- (26) a. *Hotke-an wa patek an-an ayne.*  
 sleep-IND.S and only EXIST.SG-IND.A finally  
 ‘I was only sleeping and finally...’ (T6 19)

- b. *Neno a-anu wa an.*  
 like.this IND.A-put.SG and EXIST.SG  
 ‘I left it as it was.’ (AB 248)

## 4.11 Monoclausality vs. biclasality of *V1 wa V2* complexes: Summary

In Sections 4.1–4.10, I have tested *V1 wa V2* for mono/biclausality using the following parameters listed in Table 1. I have been treating different *V1 wa V2s* complexes as one, but tried to distinguish between them where it was possible.

**Table 1:** Monoclausal behavior (-) vs. biclausal behavior (+)

	Most V2 types	V2 <i>an/oka</i> EXIST	V2 <i>isam</i> DISAPPEAR
Verbal indexing	+	+	+
No subject sharing	-	+	+
Expression of plurality	+	+	+
Subject honorification	+	+	+
Expression of TAM and evidentiality	-	+	-
Expression of negation	+	+	+
Relativization and nominalization	-	-	-
Topicalization and focusing	-	-	-
Coordination	-	+	-
Scope of adverbs	-	+	+

With regard to verbal indexing (Section 4.1) and verbal plurality (Section 4.3), all *V1 wa V2* types show biclausal properties because both verbs are indexed for the person and number of S/A/O separately and both verbal stems are adjusted accordingly. The same holds for subject honorification (Section 4.4) and negation (Section 4.6).

All *V1 wa V2* complexes behaved like a monoclausal construction with regard to relativization/nominalization (Section 4.7) and topicalization/focusing (Section 4.8), which can probably be regarded as a syntactic evidence for the co-lexicalization of two verbs.

A monoclausal feature of obligatory subject sharing (Section 4.2) is characteristic of most V2 types, except V2 EXIST and V2 DISAPPEAR, which also show similar biclausal behavior with regard to expression of TAM/evidentiality (Section 4.5) and scope of adverbs (Section 4.10). Moreover, V2 EXIST has tested biclausally for coordination (Section 4.9).

In conclusion, V2 EXIST and to a lesser degree V2 DISAPPEAR can still be regarded as predominantly biclausal (i.e. coordinate) clauses. On the contrary, most V2 types are in the process of turning into monoclausal structures (6 features) but such key morphosyntactic characteristics as person marking, verbal plurality etc. (4 features) remain intact hampering further monoclausal reanalysis. I suggest that there should be a historical explanation for such a discrepancy between different *V1 wa V2* types, i.e. different history of how they came into being in Ainu, which will be elucidated in Section 6.



## 5 Semantic features of *V1 wa V2* complexes and their Japanese equivalents

In Table 2, I have summarized token frequencies of particular *V1 wa V2* types and their Japanese equivalents from the K corpus (44,717 words, 7 hours).

Eight *V1 wa V2* types were attested in the K corpus, viz. with V2 EXIST, DISAPPEAR, COME, GO, GIVE, PUT, FINISH, SEE. Most of them have close semantic equivalents in Japanese and some only rough equivalents, viz. V2 EXIST, DISAPPEAR, and FINISH. In total, *V1 wa V2* complexes in Ainu are six times less frequent than their *V-te V* equivalents in Japanese. This is largely because V2 EXIST type, which is the most frequently used one in both Ainu and Japanese (cf. “over half of those occurrences are with the auxiliary *iru* or its synonyms” in Martin (2004 [1975]: 512)), can express only stative perfect in Ainu while it expresses stative/actional perfect and progressive in Japanese. Another explanation for the low frequency of *V1 wa V2* has to deal with a low degree of grammaticalization of most its types as compared to that in Japanese. In ensuing sections, I will focus on the semantics/usage of particular types of *V1 wa V2* and compare them with their Japanese equivalents (“?” indicates rough equivalents).

### 5.1 *V1 wa an/oka* EXIST

As mentioned, *V1 wa an/oka* (SG/PL) EXIST is employed for expressing stative resultative only, unlike Japanese which employs its *-te iru* construction for perfect resultative, actional perfect, and progressive. In Ainu, progressive is expressed with a different construction involving the subordinating conjunction *kor* ‘when’. Actional perfect is expressed with an auxiliary verb *a* placed directly after the notional verb (11).

V1s participating in *V1 wa an/oka* EXIST are basically limited to intransitive and transitive verbs designating change of state/location of the subject or object referent. If the change of state/location of the subject referent is implied, the subject of V2 is coreferential with the subject of V1 (27a), and if the change of state/location of the object referent is implied, the subject of V2 is coreferential with the object of V1 (27b).

- (27) a. *Tokap an kor hotke-an wa an-an.*  
 noon exist.SG when lie.down/sleep-IND.A and EXIST.SG-IND.S  
 ‘In the afternoon, I would lie down.’ lit. ‘lie down and stay.’  
 (K7908032UP)
- b. *Inaw ka a-roski wa oka ruwe ne.*  
 prayer.sticks even/also IND.A-stand.PL and EXIST.PL INF.EV COP  
 ‘There were *inaw*-prayer sticks set (around the lake).’  
 (K8108011UP.072)

Table 2: Token frequency of *V1 wa V2* complexes in the K corpus (Ainu: Saru)

English Gloss	Ainu Form	Ainu <i>V1 wa V2</i> function	Token frequency of <i>V1 wa V2</i> in K corpus	Japanese form	Japanese <i>V-te V</i> function	Token frequency of <i>V-te V</i> in K corpus
1. EXIST	<i>an</i> SG/ <i>oka</i> PL (vi)	Stative resultative	121	<i>?iru</i> 'exist animate', <i>aru</i> 'exist inanim.'	a. Stative result b. Actional perfect c. Progressive	723
2. DISAPPEAR	<i>isam</i> (vi)	Perfective	20	<i>?simau</i> 'put away'	a. Perfective b. Completive	109
3. COME	<i>ek</i> SG/ <i>arki</i> PL (vi)	a. Directional: to speaker b. Completive	38 (a: 33) (b: 5)	<i>kuru</i>	a. Directional: to speaker b. Completive	311
4. GO	<i>arpa</i> SG/ <i>paye</i> PL (vi)	a. Directional: from speaker b. Inchoative	16 (a:15) (b:1)	<i>iku</i>	a. Directional: from speaker b. Inchoative	100
5. GIVE	<i>kor-e</i> (vd)	Benefactive	18	<i>kureru</i>	Benefactive	212
6. PUT	<i>anu</i> SG/ <i>ari</i> PL (vt)	Preparatory	9	<i>oku</i>	Preparatory	39
7. FINISH	<i>okere</i> SG/ <i>oker-pa</i> PL (vt)	a. Completive b. Intensive degree	8 (a:1) (b:7)	<i>?simau</i> 'put away'	[a. Perfective b. Completive]	[109]
8. SEE	<i>inkar</i> (vi)	Tentative	4	<i>miru</i>	Tentative	64
Total			234			1558

There are also some V1s that do not belong to the class of change of state/location verbs, such as *siknu* ‘live, be alive’ (vi), *tére* ‘wait’ (vt), and *nukar* ‘see’. Their use in this stative resultative construction is licensed by the additional inchoative meanings of most Ainu verbs, e.g. *tére* i. ‘wait for sth/sb’, ii. ‘start waiting for sth/sb’ (vt), as in (6).

Occasionally, we find in V1 position even stative-like verbs such as *an* ‘exist’, *poro* ‘big’ (28), and *pirka* ‘good’. Satō (2008: 199, 201) describes such use as “accidental/temporary/momentary”. I suggest that this is a realization of a more general principal: the presence of both stative ‘be’ and inchoative ‘become’ meanings in Ainu verbs.

- (28) *To nen póka poro wa an ruwe ne p orano.*  
 that some only big and EXIST.SG INF.EV COP NR then  
 ‘Somehow like that I grew up.’ lit. ‘became big and remained (so).’ (T2 42)

## 5.2 V1 *wa isam* DISAPPEAR

V1 *wa isam* DISAPPEAR expresses perfective aspect and “is used when the process is completed as a result of exhausting its possibilities for continuation, or when it has resulted in the disappearance of its subject (with intransitive verbs) or its object (with transitive verbs)” (Refsing 1986: 193). It is usually translated into Japanese with the *-te simau* ‘put away’ construction but we should bear in mind that it is only a rough equivalent. For instance, *wa isam* DISAPPEAR seems to lack a modal overtone of regret which is often present in the Japanese *-te simau* complex, cf. *wa okere* in Section 5.6.

In V1 position, we typically find intransitive verbs denoting change of location/state, e.g. *arpa* ‘go’, *i-hoppa* ‘leave the world’, *ekimne* ‘go to the mountains’, *soyenpa* ‘go outside’, *onme* ‘grow old and die’, *ray* ‘die’, and *sat* ‘dry out’, or transitive verbs of destruction, e.g. *ray-ke* ‘kill’, *uhuy-ka* ‘burn’, *e-ikka* ‘steal sth/sb’, *rep-o-parse* ‘get swept out offshore’, and *sir-ko-terke* ‘kick down’. The former normally involve coreferential subjects and the latter non-coreferential, cf. (29a) and (29b).

- (29) a. *Konto eun arpa wa isam hi ka a-erampewtek.*  
 then where.to go.SG and DISAPPEAR NR even/also IND.A-not.know  
 ‘I don’t know where (the dog) has gone.’ lit. ‘went and disappeared’  
 (K7708242UP)
- b. *Kotan a-uhuy-ka wa isam.* (K8007292UP.027)  
 village IND.A-burn-CAUS and DISAPPEAR  
 ‘The village was burned down.’ lit. ‘somebody burned (it) and (it) disappeared’

### 5.3 V1 *wa ek/arki* COME and V1 *wa arpa/paye* GO

Just like Japanese, Ainu has two parallel constructions with COME and GO (cf. J *-te kuru* and *-te iku*), which denote actions directed respectively to/from the speaker.

- (30) *Nay or\_ ta kor wa arpa hine,*  
 stream place LOC have and GO.SG and  
*ani wakka-ta wa ek ruwe ne akus.*  
 INST water-dig and COME.SG INF.EV COP then  
 ‘He took (it) to the stream [from the speaker who is in the house] and drew  
 some water with (it) [to the speaker].  
 (Then he came back.)’ (K7803231UP.059–061)

In Japanese, these two constructions have additional aspectual meanings, i.e. COME may refer to an action/process completed to the point and GO to an ongoing or starting action/process. These aspectual meanings are also occasionally attested in Ainu (31), but the frequency of aspectual (as opposed to directional) meanings is very low (see Table 2), which indicates the low degree of grammaticalization of the COME/GO constructions in Ainu. The inchoative meaning of GO is particularly poorly developed.

- (31) a. *Yupet put-u un utar... a-ray-ke wa ek-an.*  
 Yubetsu mouth-POSS attach people IND.A-die-CAUS and COME.SG-IND.S  
 ‘The men of the Yubetsu estuary, I killed them all.’ (K7908051UP)
- b. *Si-kiru wa arpa ap orowa.*  
 REFL-turn and GO.SG but then  
 ‘(The dog) started turning, but then...’ (NH2 172)

A low degree of grammaticalization of the COME/GO constructions in Ainu is obvious not only from their low token frequency but also from the type frequency (with V1s other than motion verbs). This agrees with Shibatani’s generalization on grammaticalization of motion verbs: “Semantically incongruous contexts facilitate grammaticalization” (Shibatani 2007: 130). Thus, most frequent V1s are motion/caused motion verbs, e.g. *tura* ‘follow’, *rûra* ‘carry’, *kor* ‘have’, *san* ‘descend’, *kira* ‘escape’, *siren* ‘lead’, *kay* ‘carry on the back’, *hoyupu* ‘run’, *kusa* ‘take across a river by boat’, and occasionally *kar* ‘make’, *ray-ke* ‘kill’, *pa* ‘find’, *tuy-e* ‘cut’, *ki* ‘do’, *e-ikka* ‘steal’.

### 5.4 V1 *wa kore* GIVE

The benefactive is expressed by V2 *kor-e* ‘give’ which is a causative from *kor* ‘have’.

- (32) *A-kor nispa yaytomoytak wa i-kor-e yak pirka.*  
 IND.A-have rich.man calm.down and IND.O-have-CAUS(=GIVE) if good  
 ‘My lord, calm down for me.’ lit. ‘calm down and give (it) to me’  
 (K8010281.UP)

According to Refsing (1986: 203) and Satō (2008: 22), *V1 wa kore GIVE* is used in Ainu only in requests and orders. The present study has revealed that though contexts involving requests/orders (typically, requests for prayers/offerings) certainly prevail (32), regular assertive contexts are also possible (33). I suggest that the latter use may have been reinforced under even greater recent influence of the Japanese *-te kureru* construction. It is prominent in the speech of the last Ainu speakers (Bugaeva 2004).

- (33) *Apa cak-a wa i-kor-e.*  
 door open-CAUS and IND.O-have-CAUS(=GIVE)  
 ‘(My mother) opened the door for me.’ (AB 66)

### 5.5 *V1 wa anu/ari* PUT

While almost any verb can occur as V1 in the Japanese PUT complex (Pardeshi 2007: 299), V1s attested in *V1 wa anu/ari* are limited to transitive verbs of hiding/placing which are semantically close to V2 PUT, e.g. *oma-re* ‘put sth on sth’, *seske* ‘shut up’, *e-sik-te* ‘fill sth with sth/sb’, *nuyna* ‘hide sth/sb’, *ko-hokus-te* ‘bring down sth on sth/sb’, and *rúra* ‘carry sth/sb’.

As mentioned, V2 PUT can combine with another V2 (5). Overall, it is much less grammaticized than its Japanese equivalent, i.e. less frequent, shows less V1 variation, and has no phonologically reduced variants, cf. Japanese *-toku < -te oku* PUT.

### 5.6 *V1 wa okere/okerpa* FINISH

The Ainu construction may render either (i) completive aspect (34) or, more frequently, (ii) intensive degree of some quality encoded by V1 (20). In the case of (i), V1 should be a transitive action verb, and in the case of (ii), an intransitive quality verb.

The completive aspect is commonly rendered in Japanese by a compound structure *-si-owaru* (-do-finish). However, according to Satō (2008: 89), the completive meaning of *V1 wa okere/okerpa* FINISH is often accompanied by a modal overtone of regret about the result of action, just like the Japanese *-te simau*, which entails “annoyance and displeasure at the sudden deterioration of a good situation or the frustration of one’s expectations” (Martin 2004 (1975): 534). Therefore, the Japanese *-te simau* too can be regarded as an equivalent of *V1 wa okere/okerpa* FINISH but

only as a rough one since it does not include the meaning of (ii) intensive degree of some quality.

- (34) *Tan yuk tan ukuran e-e wa e-okere yak.*  
 this deer this evening 2SG.A-eat and 2SG.A-FINISH if  
 ‘If you eat all of this deer tonight (I will make you my wife.)’  
 (K8010291UP.250)

## 5.7 V1 *wa inkar* SEE

Ainu has a construction with V2 *inkar* SEE (vi), which is cross-linguistically commonly used to express the meaning that an action encoded by the first verb is tentative, viz. ‘try doing sth’, cf. Japanese *-te miru* SEE and Korean *-a/e po-ta* SEE – performing an action and visually evaluating the resultant situation. Most frequently occurring V1s are motion verbs, e.g. *arpa* ‘go’, *ekimne* ‘go to the mountains’, *omanan* ‘walk’ etc.

- (35) *Arpa-an wa inkar-an rusuy kusu.*  
 go.SG-IND.S and SEE-IND.S DESID because  
 ‘I wanted to try to go (to my parents-in-law’s place.)’ (K7708242UP.273)

## 5.8 V1 *wa inu* HEAR

Though not attested in the K corpus, Ainu has one more construction with the meaning ‘try doing sth’, viz. V2 HEAR (vi). According to Tamura (2000: 185), *inu* HEAR is used as V2 when an action performed involves auditory, tactile, and other sensory evaluation of the situation afterwards, i.e. all kinds of evaluation except visual (cf. V2 SEE in Section 5.7).

- (36) *Yaykouepeker-an wa i-nu-an hike.*  
 think.over.one’s.troubles and APASS-HEAR-IND.S then  
 ‘I tried to think of my troubles.’ (N 386)
- (37) *Na sine ancikar tu ancikar\_ rews\_i-an w\_a i-nu-an ro.*  
 more one night two night stay-IND.S and APASS-HEAR-IND.S HOR  
 ‘Let’s try to stay (here) for one or two nights more.’ (NH1 115)

However, in my Chitose data, only one V1 was attested in V2 HEAR, viz. *ipe* ‘eat’ (vi) (Bugaeva 2004), and even with this verb my speaker would often use V2 SEE instead, most likely under the influence of Japanese which has SEE but lacks HEAR.

- (38) *Ipe-an*     *ma*     *i-nu-an*                     *hike*.  
 eat-IND.S and APASS-HEAR-IND.S then  
 ‘We tried the food.’ lit. ‘We ate the food and we felt (its taste).’ (AB 283)
- (39) *A-i-ko-y-puni*                                     *wa*     *ipe-an*     *ma*     *inkar-an*.  
 IND.A-IND.O-to.APPL-APASS-raise and eat-IND.S and SEE-IND.S  
 ‘I was offered food and I tried to eat.’ (AB 263)

## 6 V1 wa V2 complexes: A historical overview

Despite apparent syntactic differences both Hokkaido Ainu and Japanese have complexes of ‘V1 linker V2’ type originating in coordination/subordination. There is a striking similarity of V2s employed in Hokkaido Ainu and Japanese and relative similarity of meanings of the resultant complex predicates. However, unlike *V1 -te* V2 in Japanese, *V1 wa V2* complexes in Ainu still retain many biclausal features and are less grammaticalized (less variation in V1) and less frequent, which suggests that at least some *V1 wa V2* types may have been calqued from Japanese into Ainu. Next, I will try to speculate about the time of assumed language contact.

As to Japanese, according to Frellesvig (2010), *V1 -te* V2 complex predicates (‘gerund’) came to be widely used in Late Middle Japanese (1200–1600) as in (40). Though the gerund with V2 **ar-** is attested as far as in Old Japanese (700–800) and Early Middle Japanese (800–1200), its use was limited to the formation of statives from the lower and upper bigrade verbs, e.g. *panarete ar-* ‘be separate’ (< *-panare* ‘become separate’), while with verbs of other classes the infinitive *Vi V* was used instead (e.g. *mi miru* ‘tries looking’). Later the gerund with V2 **ar-** was generalized to occur with all classes and eventually in Late Middle Japanese replaced the infinitive (p. 69). Further, from Late Middle Japanese (1200–1600) a number of other V2s habitually came to combine with the gerund, e.g. VERB-*te* *mi-* ‘try VERB-ing’ (*mi-* ‘see’), VERB-*te* *ok-* ‘do and leave; do in advance’ (*ok-* ‘put’), VERB-*te* *kure-* ‘VERB for me/my sake’ (*kure-* ‘give (me)’), VERB-*te* *kudasare-* ‘VERB.RESP for me/my sake’ (*kudasare-* ‘give (me) (RESP)’), VERB-*te* *tamawar-* ‘id.’, VERB-*te* *tabasim-* ‘id.’ (p. 328).

- (40) Example of *V-te aru* EXIST: stative meaning

*Tokiwa Suruga=no mori Norisada fitori tosite ryou*  
 PN PN=GEN lord PN himself by both

*Rokufara=no seibai=o tukasadori-te ar-i-si-ga.*

Rokuhara=GEN execution=ACC administer-GER exist-INF-AND=NOM

‘(the fact that or while) Tokiwa Norisada, the lord of Suruga, had himself administered the execution of both Rokuharas (a governmental post in the Kamakura Bakufu)’ (M: 253; Taiheiki 6, the late 14th century)

Thus the Japanese-Hokkaido Ainu language contact resulting in grammaticalization of several *V1 wa V2* types in Hokkaido Ainu could have taken place only after the 13th century, i.e. after the spread of *V1-te V2* in Late Middle Japanese. If my assumption is correct, *V1 wa V2* should be absent/rare in Sakhalin Ainu since as is well known the expansion of the Ainu from Hokkaido to Sakhalin took place in the 13th century (Kikuchi 1999: 50).

According to Murasaki (1979: 55, 57), the eastern Sakhalin dialect of Raichishka has only the perfective *wa isam* DISAPPEAR and perfect resultative *teh 'an/okay* EXIST types; the latter employs a different subordinating/coordinating conjunction *teh* which is characteristic of Sakhalin Ainu. The situation in the western Sakhalin dialect of Taraika seems to be the same (Pilsudski 1912; Murasaki 1971).

- (41) a. *Neya nupuru 'okore nuyuyu wa isam.*  
 those mountain all crumble and DISAPPEAR  
 'He has crumbled all mountains.' lit. 'crumbled and they disappeared.'  
 (MK1 99)
- b. *'Omanu wa 'isam aynu.*  
 go.SG and DISAPPEAR man  
 'a man who is gone' lit. 'a man (who) went and disappeared' (MK2 57)
- (42) a. *Sik-ihī ka 'uwa'uwa teh an kamuy an.*  
 eye-POSS even/also glitter and EXIST.SG god exist.SG  
 'There was an animal with glittering eyes.' (MK1 38)
- b. *'Orohko 'okay-ahci weeper-ehē nu-hci teh 'okay-ahci.*  
 Orok exist.PL-PL story-POSS hear-PL and EXIST.PL-PL  
 'They heard stories that the Orok people lived (there).' (MK1 14)

Murasaki (1979: 129) also mentions for Sakhalin Ainu a few other *V1 wa V2* types but it is obvious from her description that they are just coordinated predicates with no signs of grammaticalization. For example, she notes that *\*ku-kor wa ku-'ek* (have and come) with the intended meaning 'I bought it (towards the speaker)' and *\*re'usi wa omanu wa* (stay and go) with the intended meaning 'stay (out-of-home)' are regarded as ungrammatical because two actions are disconnected and not perceived as one.

Overall, although Sakhalin Ainu had possessed the same syntactic and lexical resources for complex predicate formation as Hokkaido Ainu with the only exception of FINISH type which is expressed with the auxiliary (=light) verb *hemaka* (see Section 7) and does not allow variation with a conjunction, it did not develop a variety of grammaticalized *V1 wa V2* complexes. I suggest that in Hokkaido Ainu the process of grammaticalization of most *V2* types has been reinforced through



extensive language contact with Japanese in the Meiji (1868–1912) and post-Meiji periods while the lack of such contact in Sakhalin Ainu resulted in the scarcity of *V1 wa V2* complexes. Furthermore, V2 EXIST and V2 DISAPPEAR, which are attested in both Sakhalin and Hokkaido Ainu, are very different from other *V1 wa V2* types in that they are predominantly biclausal (Section 4.11) and their meanings considerably deviate from those of the Japanese equivalents (Sections 5.1 and 5.2). There is no doubt that V2 EXIST and V2 DISAPPEAR complexes are inherent to Ainu and their grammaticalization occurred quite early, i.e. before the 13th century Hokkaido-Sakhalin Ainu split.

## 7 Evidence for interaction with Japanese in the formation of complex predicates in Hokkaido Ainu

In this section, I will focus on the Hokkaido Ainu internal evidence in order to reassure that the spread of *V1 wa V2* complexes in Hokkaido Ainu can be attributed to the influence of Japanese and to elucidate the language contact effect in some detail.

As mentioned, two out of nine *V1 wa V2* complexes in Hokkaido Ainu, viz. intransitive V2 EXIST and DISAPPEAR, are not due to Japanese-Hokkaido Ainu language contact but are rather inherent to Ainu. The remaining seven types are heterogeneous in terms of their transitivity value, i.e. transitive *kore* GIVE, *anu/ari* PUT, and *okere/okerpa* FINISH and intransitive *ek/arki* COME, *arpa/paye* GO, *inkar* SEE, and *inu* HEAR, which underlies different contact scenarios.

I suggest that all transitive types are completely innovative: they were calqued from Japanese, cf. Tamura (2013: 93) who mentions as borrowings *kor-e* GIVE and *anu/ari* PUT. In fact, having a transitive verb as V2 may pose a problem in terms of meeting the V1 and V2 adjacency requirement, which is a prerequisite for forming complex predicates from the respective coordinating constructions (Section 3). And even if the object NP is omitted before V2, the indexing is retained on the verb (3rd person is zero) so the object is not lost, it is just shared with V1. According to Kishimoto (2017), in *V1 wa V2* complex predicates, the valency of V1 should be either the same as that of V2 or higher, i.e. it should be impossible to have an intransitive V1 and transitive V2. Although this is much more of a tendency than a strict rule (there are some exceptions), the rationale behind this is quite clear: in order to be able to get grammaticalized as complex predicates, V1 and V2 must either share the same object or lack it entirely to exclude a possibility of a different object interpretation for V2. It might not be accidental that in the case of V2 SEE and HEAR complex predicates, Ainu consistently selects intransitive verbs *inkar* ‘see’ and *inu* ‘hear’ instead of their transitive counterparts *nukar* ‘look at’ and *nu* ‘listen to’.

Intransitive types, viz. *ek/arki* COME, *arpa/paye* GO, *inkar* SEE, and *inu* HEAR, meet all prerequisites for complex predicate formation so they have just been brought

up to grammaticalized condition through contact with Japanese. Japanese has boosted their frequency and reinforced grammaticalization, e.g. SEE > ‘try’, GO > ‘start’, and COME > ‘finish’, which are cross-linguistically common grammaticalization patterns (Maisak 2005). Further, the semantic difference between the visual tentative *wa inkar* SEE and non-visual *wa inu* HEAR got neutralized and HEAR without a Japanese equivalent was eventually replaced by SEE, which had an equivalent in Japanese.

And finally, I will look at the completive/intensive degree *wa okere/okerpa* FINISH complex, which is probably the closest equivalent of the *-te simau* construction because it may (but does not have to) render even its modal overtone of regret (see Section 5.6). Here are a few reasons why it should be regarded as the most innovative complex in Ainu.

Firstly, in Hokkaido Ainu, it is still much more common to express a plain completive/intensive degree aspect with an auxiliary (=light) verb construction consisting of V1, which is marked with pronominal affixes, and V2, which is an unmarked transitive auxiliary verb typically denoting ability, knowing, and Aktionsart as in (43) and (44), cf. the respective V1 *wa* V2 examples in (34) and (20).

- (43) *Suy e-sa-ha kam-ih i a-e okere.*  
 again 2SG.A-older.sister-POSS meat-POSS IND.A-eat FINISH  
 ‘Next, (before) I finished eating the meat of your sister. .’ (K8010311UP.114)

- (44) *Pirka okere pon-menoko soyne.*  
 good FINISH young-woman go.outside  
 ‘A beautiful young woman came outside.’ (K7807151UP.077)

Secondly, there are also examples like (45) which are structurally intermediate between V1 *wa* V2 as in (34) and (20) and auxiliary verb construction as in (43) and (44). Here, the indexing on *okere* ‘finish’ is dropped but the conjunction *wa* is retained.

- (45) *K-oyra wa okere.*  
 1SG.A-forget and FINISH  
 ‘I forgot (it).’ (T1 56), (KK 299)

And, thirdly, as mentioned in Section 6, in Sakhalin Ainu, the completive meaning can be expressed only by the auxiliary verb construction which involves a non-cognate transitive (auxiliary) verb *hemaka* ‘start sth’.

All this shows that the completive/intensive degree *wa okere* FINISH complex is new and unstable; V2 FINISH is a transitive verb with a semantically (and syntactically) unutilized object valency, which should not have originally been possible in Ainu.

## 8 Concluding remarks

Ainu and Japanese, though formerly spoken in close proximity, are two structurally and genetically different languages. However, it appears that both of them possess complex predicates consisting of ‘V1 linker V2’, in which V2s express various aspectual, deictic, directional, benefactive, and attitudinal meanings (Section 3). Six out of nine *V1 wa V2* complexes attested in Hokkaido Ainu employ V2s with meanings similar to those of Japanese *-te* complexes, viz. EXIST, COME, GO, SEE, GIVE, PUT (but no exact Japanese equivalents for DISAPPEAR, FINISH, and HEAR). There is also relative similarity of meanings of the resultant complexes.

Moreover, in both languages, complexes are in the process of reanalysis of biclausal constructions, i.e. coordination in Ainu and subordination in Japanese, into monoclausal constructions in accordance with general pathways of grammar change but in Ainu this process is at a much less advanced stage than in Japanese.

According to the results of test-based analysis of the degree of mono/biclausality of *V1 wa V2* complexes in Ainu (Section 4), syntactically, the stative resultative *an/oka* V2 EXIST and to a lesser degree the perfective *isam* V2 DISAPPEAR can still be regarded as predominantly biclausal (i.e. coordinate) clauses while most V2 types are in the process of turning into monoclausal structures (6 features) but such key morphosyntactic characteristics as person marking, verbal plurality, etc. (4 features) remain intact hampering further monoclausal reanalysis.

Furthermore, based on a parallel Ainu-Japanese corpus analysis of the V2 token frequency and V1 variation in each *V1 wa V2* type (Section 5), we can say that *V1 wa V2* complexes are much less grammaticalized than their *V-te V* equivalents in Japanese. Overall, *V1 wa V2* is six times less frequent in the corpus and shows less variation in V1 semantics than *V-te V* complexes in Japanese.

In this chapter, I suggest that Japanese and Hokkaido Ainu language contact in the Meiji (1868–1912) and post-Meiji periods has played a significant role in the formation of complex predicates in Ainu (Section 6). However, I adduce four different scenarios depending on a particular complex predicate type (Section 7).

Thus (i.) intransitive complexes such as the stative resultative *an/oka* EXIST and perfective *isam* DISAPPEAR are not due to Japanese-Hokkaido Ainu contact but are rather inherent to Ainu because they are the only complexes attested in Sakhalin Ainu too. Their grammaticalization had occurred before the 13th century Hokkaido-Sakhalin Ainu split.

As to (ii.) intransitive types such as the directional/aspectual *ek/arki* COME, *arpa/paye* GO and tentative *inkar* SEE, *inu* HEAR, they had already been on the right track for grammaticalization so contact with Japanese has just boosted their frequency and reinforced grammaticalization of SEE to ‘try’, GO to ‘start’, COME to ‘finish’ etc. Later, the tentative V2 *inu* HEAR, which is absent in Japanese, was almost completely replaced by the semantically close V2 *inkar* SEE, which has a Japanese equivalent.

On the contrary, (iii.) transitive types such as benefactive *kor-e* GIVE and preparatory *anu/ari* PUT were simply calqued from Japanese and this could hardly have happened without Japanese influence because having a transitive V2 in this construction poses a problem for grammaticalization in terms of meeting the V1 and V2 adjacency requirement and putting additional restrictions on the transitivity of V1.

And finally, (iv.) another transitive type *okere/okerpa* FINISH with the meaning of completive/intensive degree aspect, which can also be expressed with the auxiliary (=light) verb construction, is the most innovative complex. The *okere/okerpa* FINISH complex was formed by analogy to other *V1 wa V2* complexes after they became frequent and spread widely in Hokkaido Ainu. However, it is still not fully fixed in grammar alternating with a functionally similar auxiliary verb construction as in (43), (44) and with a construction which is syntactically intermediate between the two as in (45).

Japanese as a language at a more advanced stage of grammaticalization of complex predicates has influenced Ainu where the pace of grammaticalization had originally been slower since Ainu lacks non-finite verbal forms and all verbs (except auxiliary verbs) are obligatorily marked for the person and number of the subject and object.

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Yo Matsumoto

## 9 Motion event descriptions in Japanese from typological perspectives

### 1 Introduction

The linguistic representation of motion events in Japanese is a topic that has fascinated the interest of many scholars (Ikegami 1981; Miyajima 1984; Yoneyama 1986; Matsumoto 1996a, b, 1997, 2014, 2017b; Kageyama 1997, 2003; Sugiyama 2005; Akita, Matsumoto, and Ohara 2010; Ishibashi 2012; Toratani 2012; Demizu 2015; Matsumoto, Akita, and Takahashi 2017; Koga 2017; Akita 2017). One reason scholars are fascinated by motion event descriptions in Japanese is because the language provides an interesting case in the semantic typology of motion event descriptions and related phenomena (e.g. Talmy 1985, 1991, 2000; Slobin 1996, 2004, 2006; Matsumoto 2003, 2017d; Beavers, Levin, and Tham 2009; Croft et al. 2010; Levin and Rappaport Hovav 2013). In this chapter I will survey the way Japanese allows its speakers to describe motion events in relation to some proposed typologies of motion event descriptions.

## 2 Motion events and typological issues of their linguistic representations

### 2.1 Elements of motion events

A motion event is composed of several different elements. I will use the following terms, which are based on, but slightly different from, those of Talmy (1985, 1991, 2000). Consider the events described by the following sentences.

- (1) a. *The boy ran down the slope into the hut.*  
b. *The girl kicked the stone into the pond.*

A motion event crucially involves a Figure or a moving entity (represented by *The boy* and *the stone* in (1)), which follows a certain Trajectory or a route. A Trajectory is specified by Path schemas, often in relation to a Ground. A Path schema indicates the nature of the change of the location of the Figure at a certain part of a Trajectory, and a Ground is an entity with respect to which the location of the Figure is defined (at a certain part of the Trajectory). In (1a), *down* and *into* represent Path schemas,

and *the slope* and *the hut*, Grounds. A Trajectory can be represented by a sequence of such a combination of a Path schema and a Ground (e.g. *down the slope into the hut*).

A motion event often involves a secondary event, which includes Manner of motion (e.g. running motion of limbs), Purpose of motion (e.g. to catch a train), and Concomitance (any activity that accompanies motion; e.g. singing) (Talmy 1985, 1991). In (1a) the verb *ran* represents Manner of motion involved. In (1b) the verb *kick* indicates the fact of the Causation of motion, plus the particular Means by which the causation of motion is carried out (i.e. by the impact of a moving foot).

Such components of a motion event are mapped onto different elements of a sentence. There are two major types of sentence constructions in which motion of a physical entity is described: Self-motion and Caused motion, which are exemplified in the sentences in (1) above. In Self-motion sentences the Figure occupies the subject position, while in Caused motion sentences it occurs in the object position.

The most important element of a motion event, at least in the discussion of motion event descriptions, is the Path schema. There are different kinds of Path schemas. Some Path schemas are Directional, such as UP, DOWN, EASTWARD, RIGHTWARD, etc. Other Path schemas represent Path phases (roughly, Talmy's Vector), such as a Path phase leading from a Source (FROM), one leading to a Goal (TO), or one in between (VIA). A Path schema can be semantically complex, involving a Path phase plus a Spatial relationship (which roughly corresponds to Talmy's Conformation). The preposition *into* indicates that the Goal of motion is inside the hut (Ground). Thus, its meaning has two semantic components, which can be represented as TO and IN (cf. Bennett 1980; Jackendoff 1983). The former represents the Path phase of leading to Goal, and the latter, the Spatial relationship between the Goal and the Ground. Finally, some Path schemas, such as HITHER and THITHER, are deictic, in that they represent the properties of a Path in relation to the deictic center, which is typically the location of the speaker.

## 2.2 Typological issues

There are several typological properties to discuss concerning motion event descriptions in Japanese. Probably the most important one concerns the coding position of a Path schema. Talmy (1991, 2000) claims that languages can be divided into two major types in terms of the coding position of a Path schema (Path in Talmy's terms): "verb-framed" languages and "satellite-framed" languages. The former describe the Path schema in the main verb, while the latter describe it in what he calls a "satellite", which is an element that occurs "around" the verb, in a position sister to the verb (root). The satellites include verb affixes (e.g. *aus-* in *aus-gehen* in German) and verb particles (e.g. *down* in *run down* in English). Some problems with this view have been pointed out in the literature. Talmy's distinction between verbs vs. satellites is inadequate in that it does not cover all the range of Path coding



positions, which include case markers and adpositions that do not strictly count as satellites (or a verb). Talmy's notion of "verb" is also somewhat misleading in that it in fact refers to the main verb only, and not to the verbs in subordinate positions (see Matsumoto 2003 for a review). Given such observations, Matsumoto (2003) and Croft et al. (2010) argue that the typology of motion event descriptions should be stated in terms of the contrast between the main verb root vs. other elements. Matsumoto (2017c) calls the contrast the head Path coding vs. the head-external Path coding.

It has generally been suggested, as in Talmy 1991 and Matsumoto 1997, that Japanese is a language in which Path is coded in the main verb (Talmy's verb-framed language, and Matsumoto's head Path coding language), along with Spanish and French. In this chapter I will discuss to what extent this suggestion is correct.

The typology based on Path coding positions is also often linked to several other differences of motion event descriptions among languages. It is linked to the difference in the lexical inventory of Path and Manner expressions (e.g. Wienold and Schwarze 2002; Slobin 2004; Verkerk 2013), the nature of manner verbs (Kageyama 1997; Zubizarreta and Oh 2007; Beavers, Levin, and Tham 2009), and the frequencies of the specifications of elements such as Manner (Slobin 1996, 2006; Koga 2017). I will discuss these and other related issues as well.

### 3 Lexical inventory of motion-related expressions

Languages differ in the inventory of motion related lexical items, in a way related to the typology of Path coding positions (Wienold and Schwarze 2002; Verkerk 2013) and/or to some other typological parameter concerning the coding of expressions related to motion (Hirose 1981; Matsumoto 2003). In this section I will examine the inventory of such items in Japanese.

Expressions encoding Path schemas can be divided into two major types: those which can be used for both Self-motion and Caused motion, and those which can be used only for one of them (Matsumoto 2017d). The former are called Neutral items, which include such head-external elements as verb affixes, adverbs, adpositions, and nominal case markers. The latter are called Specialized items, and verbs usually fall into this category. Japanese is a language that has a relatively limited set of the former and abounds in the latter.

Japanese has only a few adpositions marking Path schemas. They represent Path phases (FROM, TO) or Directionality (TOWARD):

- (2) *ni* 'to', *e* 'to, toward', *kara* 'from', *made* 'as fa as'

Spatial relations are expressed by the use of local nouns in (3).

- (3) *naka* ‘inside’, *soto* ‘outside’, *ue* ‘top’, *sita* ‘bottom’, *yoko* ‘side’,  
*mawari* ‘circumference’, etc.

Thus, the notion coded in English *into* is analytically coded in the combination of a local noun and a postposition, as in *X no naka ni* (X GEN inside GOAL).

Many Japanese verbs of motion conflate the fact of motion with a simplex or complex Path schemas (e.g. TO, TO+IN) (see Miyajima 1984; Matsumoto 1997). Examples include the following. (4a) are deictic verbs, and (4b) nondeictic path verbs.

- (4) a. *iku* ‘go’, *kuru* ‘come’  
 b. *agaru* ‘ascend’, *noboru* ‘ascend, climb’, *oriru* ‘descend’, *otiru* ‘fall’,  
*deru* ‘exit’, *hairu* ‘enter’, *tooru* ‘go through, pass’, *sugiru* ‘pass’,  
*koeru* ‘go over’, *mawaru* ‘go around’, *tuku* ‘arrive’, *itaru* ‘lead to’,  
*saru* ‘leave’, *syuppatu suru* ‘depart’, etc.

Many of the verbs in (4b) have causative counterparts, shown in (5).

- (5) *ageru* ‘make ascend’, *orosu* ‘make descend, bring down’, *otosu* ‘let fall’,  
*dasu* ‘make exit, take out’, *ireru* ‘make enter, put in’, *toosu* ‘let go though’,  
*mawasu* ‘make go around’

Notably, there are no causative deictic verbs. Also, some path verbs, such as *koeru* and *noboru* do not have corresponding causative verbs.

There are also several verbs conflating the fact of motion with Manner of motion, given in (6).

- (6) a. *aruku* ‘walk’, *hasiru* ‘run’, *kakeru* ‘run, gallop’, *hawu* ‘crawl’, *oyogu* ‘swim’,  
*tobu* ‘fly’  
 b. *hura-tuku* ‘totter’, *bura-tuku* ‘wander’, *zyokoo suru* ‘move carefully and slowly’, *kyuukoo suru* ‘move hurriedly’

Simplex (monomorphemic) manner verbs, listed in (6a), are relatively few and are quite general in meaning, and no verbs are found for specific manners equivalent to English *swagger*, *lumber*, etc. (6b) are examples of morphologically complex verbs, with mimetic roots and a verbal suffix, or Sino-Japanese verbal nouns and a light verb. Japanese has a rich set of adverbials to represent subtle differences in the Manners of motion (Matsumoto 2003; Toratani 2012; Akita 2017):

- (7) a. *yukkuri* ‘slowly’, *isoide* ‘hurriedly’, *oomata-de* ‘with big strides’

- b. *nosi-nosi* ‘in a lumbering manner’, *tobo-tobo* ‘in a plodding manner’,  
*yochi-yochi* ‘in a toddling manner’, *yoro-yoro* ‘in a tottering manner’,  
*iso-iso* ‘delightedly’, *suta-suta* ‘with brisk steps’, *teku-teku* ‘in a trudging  
manner’, *bura-bura* ‘in an ambling manner’, *uro-uro* ‘in a loitering manner’,  
*pyon-pyon* ‘in a hopping manner’, *gata-goto* ‘in a rattling manner’, *sui-sui*  
‘in a smooth manner’

(7a) illustrates non-mimetic manner adverbs, while (7b) exemplifies mimetic or onomatopoeic adverbials, which are plentiful in Japanese not just in the conceptual domain of manners of motion but also in manners of other actions (e.g. speaking, laughing, shining) (Hirose 1981). Some of the roots of these mimetic adverbs are used to form complex verbs like *hura-tuku* ‘totter’ and *bura-tuku* ‘wander’ in (6b). Speakers of Japanese often employ “expressive” or nonconventional mimetic adverbials, with prolonged vowel length or unusual reduplications, as in *batabatabatabata* ‘stomping heavily and repetitively’ (Akita 2017).

Verbs for causative motion include those causative path verbs listed above, as well as verbs of putting/taking, listed in (8), and those that represent the Means of causation, listed in (9).

- (8) *oku* ‘put’, *toru* ‘take’, *sueru* ‘set’,

- (9) *nageru* ‘throw’, *keru* ‘kick’, *osu* ‘push’, *hiku* ‘pull’, *hakobu* ‘carry’

As in (4), Japanese has all major Path categories expressed in the verbs, at least in verbs used for Self-motion sentences. This rich inventory of path verbs is expected of languages that prefer head coding of Path, which presupposes the existence of path verbs. The number of manner verbs in Japanese is in contrast relatively small, in comparison to some head-external Path coding languages like English and German, which have more than 100 (Snell-Hornby 1983; Levin 1993). What is noteworthy is that the manner verb lexicon in Japanese is even smaller than some head Path coding languages such as French and Italian, which have a richer set of monomorphemic specific manner verbs, including those for ‘stroll’, ‘trot’, etc. (Verkerk 2013). Perhaps the small size of inventory of manner verbs in Japanese is compensated for by the existence of rich mimetic manner adverbials, which are not found richly in Romance languages. This richness of mimetic manner adverbials in Japanese appears to make it possible for this language to have a smaller inventory of manner verbs than some other languages of the same typological type.

One characteristic of the Japanese motion expression inventory is the existence of verb complexes. The verbs listed above are very often used in combination, and there are certain restrictions on the order and combination of the verbs. There are two types of verb complexes, V-V compounds and V-*te* V complexes, which allow

different combinations. The following combinations of verbs are possible in V-V compounds, with “A” referring to Accompanying action (or Concomitance), “M” to Manner, and “P” to Path (Matsumoto 1997).

- (10) A-M: *uri-aruku* (sell-walk) ‘walk selling’  
 A-P: *uri-mawaru* (sell-go.around) ‘go around selling’  
 M-P: *aruki-mawaru* (walk-go.around) ‘walk around’  
 A-M-P: *uri-aruki-mawaru* (sell-walk-go.around) ‘walk around selling’

Notably, deictic verbs do not participate in V-V compounds. Instead, they participate in the V-*te* V complex, which can have the following three combinations, with “D” referring to Deixis.

- (11) P-D: *agat-te kuru* (ascend-TE come) ‘come up’  
 M-D: *hasit-te kuru* (run-TE come) ‘come running’  
 M-P-D: *hasit-te agat-te kuru* (run-TE ascend-TE come) ‘come up running’

Based on (10) and (11), the following common generalization about the order of verbs in the two kinds of verb complexes can be made (Matsumoto 1997).

- (12) Verbs can only appear in the following order:  
 Action > Manner > Path > Deixis

For Caused motion, compounding is possible with Means of causation in the first verb and causative path verb in the second, as in (13).

- (13) Mns-P: *nage-ageru* (throw-make.ascend) ‘throw upward’

Note that the second verb must be in the causative form in order to conform to the subject sharing condition of Japanese compound verbs (Matsumoto 1998). Due to the lack of causative deictic verbs, no complex predicates can be formed for Caused motion parallel to (11).

## 4 Coding position of Path

Talmy (1991, 2000) argues that Japanese is a verb-framed language. However, the situation is slightly more complex. Corpus and experimental data show that Path is certainly often coded in main verb position, but it is also often coded in other positions.

First, the statement about the coding position of a Path schema depends on whether the Path schema considered is deictic or not. Matsumoto's (2017b) examination of the pre-published version of *The Balanced Corpus of Contemporary Written Japanese* (BCCWJ)<sup>1</sup> reveals that nondeictic path verbs usually occur as the head of the sentence when Deixis is absent (see also (12 above)). The combined cases of path verbs used alone and path verbs used as the last element of a verbal complex account for slightly more than half of the all examples of Self-motion sentences examined. In almost all of these cases no Deixis is specified. About the 40% of the examples have a deictic verb used alone as the main verb or as the last element of a verb complex. Note that as shown in (11) above, Deixis is placed in the last verb (head) of *V-te V* complexes, when it cooccurs with nondeictic path verbs. Manner verbs head less than 10% of the sentences.

Evidence from other languages such as Newar (Matsuse 2017) suggests that the coding position of Deixis can differ drastically from other Path schemas, and that Deixis should be treated separately from canonical Path schemas in discussing the typology of Path coding positions (Matsumoto 2017d). Given this separation, one can say that Japanese employs head coding for deictic Path schemas, and conditional head coding for other Path schemas in the sense that non-deictic Path schemas are in the head position only in the absence of Deixis (Matsumoto 2017b).

Second, the coding position of nondeictic Path schema depends on the particular Path schema used. The coding of Path phases TO and FROM tends to be in the adpositions, as shown in (14).

- (14) *Eki*        *{ni/kara}*        *hasit-te*    *it-ta*.  
       station {GOAL/SRC} run-TE    go-PST  
       ‘(He) ran to/from the station.’

Although the Path phases of TO and FROM can also be coded by verbs (e.g. *saru* ‘leave’ and *tuku* ‘reach’), the choice of such verbs to indicate the Path phases is far less frequent than the use of source/goal postpositions.

Directional Path schemas such as UP and DOWN, in contrast, are predominantly expressed in the verb, as in (15a), as is also true of the Path phase of VIA (Kageyama 1997), as in (15b).

- (15) a. *Kaidan*    *o*        *agat-ta*.  
       stairs    ACC    ascend-PST  
       ‘(He) went up the stairs.’  
       b. *Miti*        *o*        *watat-ta*  
       road    ACC    cross-PST  
       “(He) crossed the road.”

<sup>1</sup> This corpus is now available online at: [http://pj.ninjal.ac.jp/corpus\\_center/bccwj/](http://pj.ninjal.ac.jp/corpus_center/bccwj/)

Complex goal schemas like TO+IN are very often doubly marked, as in (16) (see also Sinha and Kuteva 1995).

- (16) *Heya no naka ni hait-ta.*  
 room GEN inside GOAL enter-PST  
 ‘(He) went into the room.’

This difference among TO, UP, and TO+IN above is consistent with the tendency observed crosslinguistically. Matsumoto (2017d) has found that these three Path categories tend to be coded in different positions: UP is most likely to be coded in the main verb, while TO is most likely to be coded in adpositions or case markers, with TO+IN in between, often marked in both means.

Path in Caused motion sentences in Japanese is coded in ways slightly different from Self-motion sentences. Descriptions of Caused motion events differ markedly according to the subtypes of Caused motion involved (Matsumoto 2017a). “Comotional” or carrying-type Caused motion events, in which the causer moves together with the moving object, are typically expressed in a quasi-Caused motion expression pattern (Matsumoto 2017b), shown in (17).

- (17) *Hon o gakkoo ni mot-te itta.*  
 book ACC school GOAL have-TE went  
 ‘(He) took the book to school.’

This sentence is linguistically a Self-motion sentence with an accompanying state of holding a moved entity.

“Controlled” or handling-type Caused motion, in which the causer continues to act on the causee as it is moved, as in the manual moving of something, is typically described with a path verb or a verb of putting, as in (18).

- (18) *Hon o {kaban ni ire-ta / tukue no ue ni oi-ta}.*  
 book ACC bag GOAL make.enter-PST/ desk GEN top LOC put-PST  
 ‘(He) put the book in a bag/on a desk.’

The descriptions of “ballistic” or throwing-type Caused motion, in which the causer acts on the causee only at the beginning of its motion, typically utilize a verb representing the means of causation such as *nageru* ‘throw’, often in a compound verb with a causative path verb as the second element, as in (19).

- (19) *Hon o hako ni nage-ire-ta.*  
 book ACC box GOAL throw-make.enter-PST  
 ‘(He) threw the book into a box.’

In the last two subtypes just seen, Deixis does not sit at the final position. Recall that Japanese does not have causative deictic verbs. This means that the head coding of Deixis in Self-motion sentences does not extend to Caused motion sentences. In this respect, the head coding of Deixis in Japanese is less consistent than in languages like Newar (Matsuse 2017), which employs this pattern even in Caused motion sentences.

## 5 Frequency of Manner and Deixis

Languages differ in the frequencies with which different components of a motion event are mentioned. Slobin (1996, 2006) argues that some languages are more “Manner-salient” than others, in that the speakers of those languages refer to Manner of motion more often than the speakers of other languages. Koga (2017) also argues that languages can differ in the frequencies of referring to deictic properties of motion. Such frequencies can be investigated in Japanese through the examination of corpus or experimental data.

Matsumoto (2017b) examined a pre-published version of the BCCWJ and found the following frequencies of use. Manner is mentioned only in 23% of the 882 Self-motion sentences examined, much less often than Manner is mentioned in the COBUILD corpus in English (Matsumoto 2017c). Similar differences have been found in Koga’s (2017) examination of parallel translation corpus data, as well as Akita, Matsumoto, and Ohara’s (2010) experimental data. Especially noteworthy is the limited frequency of the verb *aruku* ‘walk’, which occurs in only 35 examples out of 882 in Matsumoto’s (2017b) corpus study. This low frequency of the verb of walking is a pattern found in languages in which Manner does not head a sentence (e.g. Romance languages). Walking is a default Manner of motion for human beings, and the failure to mention such a Manner does not constitute a big loss of information. The indication of Manner in Japanese typically requires the use of nonhead verbal element with *-te* (as in (14) above), which is not obligatory. Mentioning the fact of walking thus achieves little semantic effect through the use of a syntactically unnecessary element, producing “cost” to the speaker (cf. Morita 2013).

On the other hand, Deixis is an element that is very often mentioned in Japanese, especially in the form of verbs, at least in Self-motion sentences. Matsumoto’s (2017b) analysis of the BCCWJ data reveals that deictic verbs are used nearly 40% of all Self-motion sentences. The high mentioning rate of Deixis in Japanese in comparison to English has also been observed by Koga (2017) and by Matsumoto, Akita, and Takahashi (2017). Such frequent mentioning of Deixis is typical of languages which code Deixis in the main verb position at which no competition with other Path properties or Manner occurs (Koga 2017). In English, in contrast, Deixis can be expressed in the main verb position (e.g. *came into my room*), and the same position

can be filled by manner verbs, which restrict the use of deictic verbs in this position. A high frequency of deictic specification in Japanese may also be a manifestation of a general property of Japanese as a language that prefers subjective construal of events (Ikegami 2005; Uehara 2006).

## 6 The nature of manner verbs and path verbs

### 6.1 Nature of manner verbs and their compatibility with a goal phrase

One of the features of Japanese manner verbs that are often noted in the literature is their restricted occurrence with a goal phrase (Ikegami 1981; Miyajima 1984; Yoneyama 1986; Matsumoto 1997), as shown in (20).

- (20) \**Taroo wa gakkoo ni arui-ta.*  
       Taro TOP school GOAL walk-PST  
       ‘Taro walked to school.’

A similar observation has been made in French and Spanish, leading some researchers to believe that this is a property of the type of languages that code Path schemas in the main verb (e.g. Beavers, Levin, and Tham 2009).

There are two important observations to make in this connection. First, not all Path phrases are incompatible with manner verbs. As shown in (21), some Path phrases are compatible.

- (21) {*soko kara / eki no hoo ni / kawa ni sotto /*  
       there SRC / station GEN direction GOAL / river along /  
       *eki made / ike no mawari o*} *arui-ta.*  
       station as.far.as / pond GEN circumference ACC walk-PST  
       ‘(He) walked from there/in the direction of the station/along the river/as far as the station/around the pond.’

Note that the compatible phrases are not necessarily atelic. In (21), the last two phrases can have a telic reading as they are compatible with time-delimiting adverbials like *zyup-pun de* ‘in ten minutes’.

Second, not all manner verbs behave like *aruku* ‘walk’ in (20) above, as shown by varying acceptability in (22).

- (22) *Soko ni* {*\*oyoida/\*hatta/#hasitta/#isoida/\*zyokoo sita/kyuukoo sita*}.  
       there GOAL {*\*swam/\*crawled/#ran/#hurried/\*went.slowly/rushed*}



As shown, the manner verbs that represent slow motion tend not to occur with the goal phrase. Matsumoto (2017d) points out that those manner verbs for faster speed that do occur with a goal are more goal-oriented in that they imply that the moving person desires to reach the goal quickly.

The unacceptability of (20) may seem to suggest that those manner verbs in fact represent the manner of moving limbs but do not represent the fact of motion (Jackendoff 1990). As pointed out in Matsumoto (1996b), the validity of such a claim depends on the nature of the fact of motion considered. These verbs do represent the driving of one's body forward or the fact of one foot landing on a position to the front of the other foot ("Figure-relative" motion) rather than simple speed of the motion of limbs. For example, (23) means that cheetahs move forward faster than any other animal, not that they move their limbs faster than any other animal.

- (23) *Tiitaa wa doobutu no naka de itiban hayaku hasiru.*  
 Cheetah TOP animal GEN inside LOC most fast run  
 'Cheetahs run fastest of all animals.'

However, the verb *hasiru* 'run' does not entail a change in geographical location or the change of location relative to objects external to the moving person ("Ground-relative" motion), as shown by the acceptability of the following sentence.

- (24) *Zyon wa aruku hodoo no ue o hantai-muki*  
 John TOP walk sidewalk GEN top ACC opposite-direction  
*ni hasit-ta. Demo mae ni susum-anakat-ta.*  
 GOAL run-PST But front toward proceed-NEG-PST  
 'John "ran" on a moving sidewalk in the opposite direction, but he was not able to go forward.'

It is important to note that these two points are also true of English manner verbs and thus in these respects English and Japanese manner verbs are no different.

How can, then, the unacceptability of (20) be accounted for? The most probable reason is sought in the nature of the "goal" marking (Matsumoto 1997; Kageyama 2003; see also Beavers, Levin and Tham 2009). The particle *ni* in (20) has a number of senses, and the most basic sense appears to be locative. Thus the particle requires the verb to have some sort of goal-orientation in order to be interpreted as a goal. A similar account has been proposed for French by Jones (1983, 1996), Cummins (1996, 1998), and others; see also Beavers, Levin, and Tham (2009), in which the goal marker is also not originally a goal marker.

Under this view, the incompatibility of a goal phrase with (some) manner verbs is not directly related to the typology of Path coding positions. This is consistent

with findings from other languages. Languages like Turkish and Indonesian tend to code Path in the main verb position, but manner verbs in those languages are compatible with a goal or dative phrase (Sneddon 1996: 189–190; Taylan 2002: 111; see also Matsumoto 2017d for discussion). Note that in those languages the goal marker does not have a locative meaning. On the other hand, languages like Newar code Path outside the main verb position (e.g. case markers, adverbs, and verb prefixes), but their manner verbs are not compatible with a locative NP in the goal reading, unlike deictic verbs (Matsuse 2017).

## 6.2 Nature of path verbs

The nature of Japanese path verbs has also attracted attention in connection to the typological nature of Japanese motion verbs. Kita (1999) has observed that the verb *hairu* ‘enter’ can be used even when there is no movement, since (25) can be used when Taro drew a circle around a square.<sup>2</sup>

- (25) *Taroo ga totemo ookina en o kai-ta node,*  
 Taro NOM very big circle ACC draw-PST because,  
*sikaku ga en ni hait-ta.*  
 square NOM circle GOAL enter-PST  
 ‘Because Taro drew a very large circle, the square entered the circle.’

Note that in this context Figure has not moved, nor has Ground (it has come to exist, but has not moved). He further claims that *hairu* does not represent a durative process on the basis of his observations about the temporal nature of the verb (e.g. he claims that it cannot be modified by *yukkuri* ‘slowly’). Based on such observations, Kita (1999) claims that the Japanese path verbs do not have motion semantics, lacking the processes of spatial translation, but that they are change-of-state verbs with the specifications of the initial and final states only (i.e. ‘not being inside’ and ‘being inside’). Kita’s observation has been used to suggest that the path verbs in languages in which Path is coded in the main verb are like change-of-state verbs (Slobin 2006).

Kita’s suggestion, however, is far from conclusive (Tsujimura 2002; Kawachi 2008). Tsujimura examines his evidence and shows that most of his evidence other than (25) is dubious (e.g. *yukkuri* is perfectly possible with *hairu*). In addition,

<sup>2</sup> The use of path verbs in sentences like (i) may seem to be another case in which path verbs represent no motion. See Matsumoto (1996b), however, for evidence showing that such sentences involve subjective or fictive motion (Talmy 2000).

(i) *Haiuee wa mati no mannaka o tooru.*  
 highway TOP city GEN center ACC go.through  
 ‘The highway runs through the center of the city.’

examples like (25) are by no means general; such examples cannot be found with other path verbs such as *tooru* ‘go through’ and *mawaru* ‘go around’. Even with the verb *hairu*, examples like (25) are possible only when it occurs with *ni*-marked argument. When it takes accusative marked object representing the boundary that Figure crosses, as in (26), such a reading is not possible.

- (26) *Iriguti o hait-ta.*  
 entrance ACC enter-PST  
 ‘(He) entered through the entrance.’

Sentences like (25) seem to be examples in which the situation that is newly realized is expressed as a result of change (admitting that *hairu* does have some change-of-state element especially when it takes a *ni*-marked argument). Japanese generally allows the use of a change-of-state verb (including those involving motion) to indicate the manifestation of a new situation, without necessarily entailing the actual process of change, as in (27).

- (27) a. *Atarasii kooen no namae wa midori-kooen ni natta.*  
 new park GEN name TOP green-park COP became  
 (lit. The name of the new park became Green Park.)  
 ‘The name of the new park has been decided as Green Park’  
 b. *Biru ga mati no mannaka ni atumatta.*  
 Building NOM city GEN center LOC gathered  
 (lit. Buildings gathered at the center of the city.)  
 ‘Now there are buildings at the center of the city.’

The example in (27a) does not mean that the name of a new park was changed to Green Park. It simply means that the park has come to have the name Green Park. (27b) does not mean that building moved but that a cluster of buildings is now found at the center of the city (see also Kunihiro 1985). The existence of such examples does not mean that the semantics of the verb *naru* ‘become’ or *atumaru* ‘gather’ generally lacks the process of a change that develops in real time. Similarly, the acceptability of (25) does not have to mean that the meaning of the verb *hairu* lacks change of location developing over time.

The following example, noted in Matsumoto (1997), can also be understood as indicating the manifestation of a new situation.

- (28) *Tookyoo wa taihuu no boohuu-ken ni hait-ta.*  
 Tokyo TOP typhoon GEN storm-zone GOAL enter-PST  
 (lit. Tokyo entered the storm zone of a typhoon)  
 ‘Tokyo is now within the storm zone of a typhoon.’

In this sentence, the verb *hairu* is used to indicate that the state of Tokyo being inside a storm zone has manifested, without entailing that the Figure (Tokyo) has moved to result in that state (it is the typhoon that moved).

## 7 Conclusion

Japanese representation of motion events is a fascinating testing ground for cross-linguistic generalizations concerning linguistic representations of events. Cross-linguistic perspectives can also shed light on the facets of the nature of Japanese that may be unrecognized if the language is studied alone. Further studies of Japanese from such perspectives would contribute much to the understanding of the language, or language variations and universals in general, especially when studies are done on an empirical basis, as the recent studies done in experimental and corpus methodology mentioned in this chapter have shown.

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Kiyoko Takahashi

# 10 Deictic motion constructions in Japanese and Thai

## 1 Introduction

Japanese and Thai, in common, have a pair of deictic motion verbs: *kuru* and *iku* in Japanese (perfect-aspect or past-tense forms *ki-ta* and *it-ta*; gerundive forms *ki-te* and *it-te*); *maa* and *paj* in Thai. The two deictic motion verbs of each language are opposite in meaning. Basically, the former venitive verbs *kuru* and *maa* mean ‘to come; to move toward the speaker’s reference point (viz. the deictic center in the speech situation, which is typically the location of the speaker at the coding time)’, while the latter andative verbs *iku* and *paj* signify ‘to go; to move away from the speaker’s reference point’. It is known that these deictic motion verbs are capable of taking part in a number of constructions which are referred to as “deictic motion constructions” in the present chapter. The existing relevant studies do not thoroughly examine all the types of the constructions in the two languages (for Japanese deictic motion constructions see Hasegawa 1993; Koga and Ohori 2008; Matsumoto 1996; Morita 1968; Moriyama 1988; Nakatani 2008; Nakazawa 2002; Sakahara 1995; Sawada 2009; Shibatani 2003, 2007; for Thai deictic motion constructions see Bickner 1989; Bilmes 1995; Gandour 1978; Minegishi and Methapisit 2003; Rangkupan 1992; Tiengburanathum 2013; and for comparison of the constructions between the two languages, see Sakamoto 1988, 1991). The present chapter, therefore, aims at comprehensively classifying deictic motion constructions in Japanese and in Thai by their formal and functional properties to clarify commonalities and differences in the uses of deictic motion verbs in the two languages. This contrastive study uncovers intriguing characteristics of deictic motion verbs in the two languages and holds implications for the analysis of deictic motion verbs in other languages.

Before going on to discuss different types of Japanese and Thai deictic motion constructions in the following sections, we will first look at the overall features of the constructions. Whereas Japanese is an agglutinating SOV language employing postpositions for case-marking, Thai is an isolating SVO language which may use prepositions for case-marking.

- (1) a. *Haha ga ki-ta.*  
mother NOM come-PST  
‘(My) mother came.’ (Japanese SC)
- b. *Titi wa tai ni it-ta.*  
father TOP Thailand DAT/ALL go-PST  
‘(My) father went to Thailand.’ (Japanese SC)

- (2) a. *Mêε maa.*  
 mother come  
 ‘(My) mother came.’ (Thai SC)
- b. *Phô paj yîpùn.*  
 father go Japan  
 ‘(My) father went to Japan.’ (Thai SC)
- c. *Phô paj yaη yîpùn.*  
 father go ALL Japan  
 ‘(My) father went to Japan.’ (Thai SC)

A deictic motion verb may be used as a single verb in a clause, as illustrated in (1) and (2). I name this simplex type of deictic motion construction the “single verb construction (in short, SC)” (Sections 2.1 and 3.1). A deictic motion verb in the single verb construction takes the subject noun phrase naming a mover. As seen from the Japanese examples in (1), the subject noun phrase of a deictic motion verb is marked with the nominative postposition *ga* or with the topic marker *wa*, and a dative/allative postpositional phrase (e.g. *tai ni* ‘to Thailand’) indicates the end-point of the relocation route of the mover. In Thai, the subject noun phrase is not marked with any case marker, and the verb’s object noun phrase or an allative prepositional phrase (e.g. *yaη yîpùn* ‘to Japan’) represents the end-point, as in (2). Noun phrases as arguments or complements of a Thai verb are not necessarily preceded by a case preposition. In formal writing or speech, however, case prepositions are apt to precede noun phrases accompanying a verb, except for the subject and the object noun phrases. The noun phrases’ specific semantic roles such as ablative (starting-point) and allative (end-point) can be made clear, not only by putting a case preposition in front of the noun phrase, e.g. (2c), but also by means of serial verbs taking the noun phrase as an argument or a complement, e.g. (4b).

A deictic motion verb may form part of a complex predicate such as the Japanese “converb construction (CC)” (Section 2.2), e.g. (3), and the Thai “serial verb construction (SVC)” (Section 3.2), e.g. (4). These constructions may be mono-, bi- or multi-clausal. This chapter deals exclusively with the mono-clausal type that denotes a single, albeit complex, event, e.g. the former reading of (3a), (3b), (4a) and (4b). The bi- or multi-clausal type, e.g. the latter reading of (3a), (3c) and (4c), depicts a series of events, and therefore it will not be examined in this chapter.

- (3) a. *Kare ga hasit-te it-ta.*  
 3.SG NOM run-GER go-PST  
 Mono-clausal reading: ‘He went running.’ (Japanese CC)  
 Bi-clausal reading: ‘He ran (for a while and then) went.’

- b. *Kare wa ie kara arui-te syokuba ni it-ta.*  
 3.SG TOP house ABL walk-GER work.place DAT/ALL go-PST  
 'He went on foot from home to the work place.' (Japanese CC)
- c. *Kare wa ki-te ason-de kaet-ta.*  
 3.SG TOP come-GER play-GER return-PST  
 'He came, played, and went back.'
- (4) a. *Phôw wîŋ paj.*  
 father run go  
 '(My) father ran away from the deictic center.' (Thai SVC)
- b. *Phôw (khon) dæŋ càak bâan paj thŭŋ thŭi tham ŋaan (léew).*  
 father (probably) walk leave home go arrive work.place (PERF)  
 '(My) father (has probably) walked, left home, moved away from the deictic center, and arrived at the work place.' (Thai SVC)
- c. *Phôw wîŋ paj (léew) hěn phŭan yím hâj.*  
 father run go (PERF) see friend smile BEN  
 '(My) father ran away from the deictic center (and then) saw (his) friend smiling for (him).'

The mono-clausality of the Thai serial verb construction (4b), which includes four motion verbs (*dæŋ* 'walk', *càak* 'leave', *paj* 'go' and *thŭŋ* 'arrive'), is corroborated by the fact that if we place the epistemic modal marker *khon* 'probably' at the beginning of the predicate or the perfective marker *léew* 'PERF' at the end, then the four-verb predicate as a whole falls under the scope of the modal marker or of the aspectual marker, respectively.

The Japanese converb construction containing a deictic motion verb is a sort of compound verb construction. However, its constituent verbs are not completely integrated to each other but are independent of each other to some extent. To illustrate, look at (3b) and (5). In (3b), the dative/allative postpositional phrase (*syokuba ni* 'to the work place') lies between the two constituent verbs (*arui-te* 'walk-GER' and *it-ta* 'go-PST'). In (5a), the topic marker *wa* is inserted between the two verbs (*de-te* 'exit-GER' and *ki-ta* 'come-PRF'). In (5b), only the first verb is passivized (*okur-are-te* 'send.out-PASS-GER'). These syntactic behaviors would not be seen unless the two constituent verbs are independent of each other at least to some degree.

- (5) a. *Haha wa de-te wa ki-ta ga aruka-nai.*  
 mother TOP exit-GER TOP come-PRF but walk-NEG  
 '(My) mother came out but did not walk.'
- b. *Tegami ga okur-are-te ki-ta.*  
 letter NOM send.out-PASS-GER come-PRF  
 'A letter has been sent toward the deictic center.'

Apart from verbal meanings (coming and going), functional (temporal or mental) meanings can be encoded by means of deictic motion verbs in the two languages. I call constructions with a deictic motion verb functioning as a functional morpheme (such as an aspectual marker or a modal marker) “subjectively modified constructions”. Subjectively modified constructions are of two types: (i) “aspect constructions (ACs)” (Sections 2.3 and 3.3) and (ii) “stance constructions (STCs)” (Sections 2.4 and 3.4).

## 2 Japanese deictic motion constructions

### 2.1 Single verb construction in Japanese

The main components of the Japanese single verb construction containing *kuru* ‘come’ or *iku* ‘go’ (Japanese SC) are listed in Table 1. (6) gives examples.

**Table 1:** Japanese SC, e.g. (1) and (6)

<i>Subject NP</i>	Mover
<i>Main verb</i>	Deictic motion: coming, going

- (6) a. *Tomodati wa tai kara kono ruuto de {ki-ta/it-ta}.*  
 friend TOP Thailand ABL this route INS {come-PST/go-PST}  
 ‘(My) friend {came/went} from Thailand along this route.’  
 (Japanese SC, self-motion)
- b. *Tomodati wa {yoji ni/yojikan de} {ki-ta/it-ta}.*  
 friend TOP {at.four.o’clock/in.four.hours} {come-PST/go-PST}  
 ‘(My) friend {came/went} {at four o’clock/in four hours}.’  
 (Japanese SC, self-motion)
- c. *Owari ga kuru.*  
 end NOM come  
 ‘An end will come; (It) will come to an end.’  
 (Japanese SC, metaphorical self-motion)
- d. *Umaku iku.*  
 well go  
 ‘(It) goes well; (It) proceeds successfully.’  
 (Japanese SC, metaphorical self-motion)

Example (6a) encompasses adverbials of source (*tai kara* ‘from Thailand’) and of path (*kono ruuto de* ‘along this route’). The ordering of these adverbials is variable.

Example (6b) contains an adverbial of arrival or departure time (*yoji ni* ‘at four o’clock’) or of required time (*yojikan de* ‘in four hours’). It is possible for the single verb construction to take locative and temporal adverbials at the same time. In addition, this construction may express metaphorical meanings, e.g. (6c) and (6d). It is noteworthy that the Japanese single verb construction with a deictic motion verb yields a number of idiomatic metaphorical expressions. In contrast, the Thai single verb construction with a deictic motion verb scarcely expresses a metaphorical meaning. Idiomatic expressions with a Thai deictic motion verb generally form serial verb constructions, e.g., *tò* {*maa/paj*} ‘subsequently (< connect + {come/go})’, *thât* {*maa/paj*} ‘next (< move.in.a.sitting.position + {come/go})’, *thûa paj* ‘throughout, in general (< be.overall + go)’, ... *paj môt* ‘all ... (< go + come.to.an.end)’, and so forth.

Expressions like those in (6c) and (6d) stem from the conceptual metaphor TIME IS SPACE, or more specifically, PASSAGE OF TIME IS MOVEMENT IN SPACE. Examples (6c) and (6d) instantiate two ubiquitous cognitive models of movement metaphors for time: (i) “moving-time” model and (ii) “moving-ego” (or “moving-world” in Fillmore’s terms) model (cf. Evans and Green 2006: 84; Fillmore 1975: 28; Hasegawa 1993: 59–61). In the moving-time metaphor, we think of the world including us as being constant and time passing by it. The event of some conclusion in (6c) (*Owari ga kuru* ‘An end will come’) is conceptualized as a moving entity; it moves towards the experiencer (Ego) (viz. coming to Ego). In the moving-ego metaphor, we regard the world including us as moving through time. In (6d) (*Umake iku* ‘[It] goes well’), time is taken as a stationary landscape and an implicit event is conceptualized as moving over the landscape; the implicit event in which the experiencer (Ego) is involved moves forward (viz. Ego’s going). Thus, the notion of Ego, which corresponds to the deictic center in deictic motion events, resides in both the moving-time and the moving-ego metaphors. Ego’s relative position in the passage of time is understood by virtue of the deictic senses of *kuru* ‘come’ and *iku* ‘go’.

## 2.2 Converb construction in Japanese

The Japanese converb construction containing *kuru* ‘come’ or *iku* ‘go’ (Japanese CC) is divided into two types. One type employs a deictic motion verb as the semantically main verb to represent the physical motion of coming/going, while a motion verb in the gerundive form that precedes the deictic motion verb adds some adverbial notion such as the manner, the specific direction, or the causal circumstances of the motion of coming/going. The preceding motion verb may be a manner-of-motion verb (e.g. *hasiru* ‘run’) or a path verb (e.g. *deru* ‘exit’) (Table 2). It may also be an accompanying causation verb (e.g. *tureru* ‘take along’) (Table 3).

**Table 2:** Japanese CC with manner-of-motion verb or path verb, e.g. (3a) and (7)

<i>Subject NP</i>	Mover
<i>Compounded verbs</i>	(V1) Manner-of-motion or Path (e.g. <i>hasiru</i> 'run', <i>deru</i> 'exit') (V2) Deictic motion: coming, going

- (7) *Titi wa de-te {kuru/iku}*.  
 father TOP exit-GER {come/go}  
 '(My) father {comes/goes} out.' (Japanese CC, self-motion)

**Table 3:** Japanese CC with accompanying causation verb, e.g. (8)

<i>Subject NP</i>	Causer and Mover at the same time
<i>Compounded verbs</i>	(V1) Accompanying causation (e.g. <i>tureru</i> 'take along') (V2) Deictic motion: coming, going
<i>Object NP</i>	Mover

- (8) *Titi wa tomodati o ture-te {kuru/iku}*.  
 father TOP friend ACC take.along-GER {come/go}  
 '(My) father {comes/goes} accompanied by (his) friend.'  
 (Japanese CC, caused motion of accompanying type)

The other type uses *kuru* 'come' as a semantically subsidiary verb to express the direction (toward the deictic center) of a caused motion denoted by an onset causation verb (e.g. *okuru* 'send out') in the gerundive form that precedes *kuru* (Table 4).

**Table 4:** Japanese CC with onset causation verb, e.g. (9)

<i>Subject NP</i>	Causer
<i>Compounded verbs</i>	(V1) Onset causation (e.g. <i>okuru</i> 'send out') (V2) Deictic motion: coming (toward the deictic center)
<i>Object NP</i>	Mover

- (9) *Titi wa tegami o okut-te kuru*.  
 father TOP letter ACC send.out-GER come  
 '(My) father sends a letter toward the deictic center.'  
 (Japanese CC, caused motion of onset type)

In (7) and (8), the semantically main verb is the second verb (*kuru* 'come' or *iku* 'go') and the semantically subsidiary verb is the first verb (path verb *deru* 'exit' in [7];

accompanying causation verb *tureru* ‘take along’ in [8]). The semantically subsidiary verbs in (7) and (8) function as an adverbial modifying the deictic motion verb that represents the motion of coming/going of the referent of the subject noun phrase. In (9), on the other hand, the semantically main verb is the first verb (onset causation verb *okuru* ‘send out’) whose meaning entails a motion of the referent of the object noun phrase (i.e. caused motion) and the semantically subsidiary verb is the second verb (*kuru* ‘come’) which merely indicates the direction (toward the deictic center) of the caused motion. It is interesting to note that *iku* ‘go’ cannot encode the direction (away from the deictic center) of a caused motion of the onset type. Moreover, the combination of *kuru* ‘come’ and an onset causation verb, e.g. (9), is in fact limited, that is, *kuru* cooccurs only with certain onset causation verbs for expressing a caused motion, e.g., *Kare wa denwa o kake-te kuru* ‘He makes a call, which comes’; *Kare wa tama o uti-kaesi-te kuru* ‘He hits a ball, which comes back’. The combination of *tuki-tobasu* ‘thrust away’ and *kuru* ‘come’ (*tuki-tobasi-te kuru*), for instance, is not acceptable for the sense that one thrusts an entity and the entity moves toward the deictic center (though it is acceptable if *kuru* conveys the speaker’s feeling of unexpectedness or affectedness; see Section 2.4). By contrast, both *maa* ‘come’ and *paj* ‘go’ in Thai follow any verbs of onset causation to express a caused motion (see Section 3.2).

## 2.3 Aspect construction in Japanese

The Japanese aspect construction containing the aspectual marker *kuru* (< *kuru* ‘come’) or *iku* (< *iku* ‘go’) (Japanese AC) expresses either (i) “continuous aspect (CONT)” (static/dynamic situation that continues) or (ii) “beginning aspect (BGN)” (dynamic situation that is beginning). The beginning aspect is an elaboration of the common aspect called “inceptive (or inchoative)”. The beginning marker *kuru* characteristically highlights an inceptive “ongoing” current situation, which may be expressed by the English phrase *to be beginning to* ... What is salient in the conceptualization of the beginning aspect is the ongoing phase of a current situation that has just begun, or in other words, a little development from the beginning of a current situation. The beginning aspect is one of the four aspects organized in terms of “temporal proximity” (Takahashi 2002). By temporal proximity, I mean “conceptual closeness between the realization of a reference situation and a given current time in any time frame”. The beginning aspect relates a current dynamic situation to a shortly prior realization of a reference situation. (N.B., The other three types of temporal proximity aspect are: [i] “recent retrospective” type, [ii] “imminent prospective” type, and [iii] “reaching” type. The recent retrospective aspect relates a current static situation to a shortly prior realization of a reference situation, e.g., *He has just got back*. The imminent prospective aspect relates a current static situation to a shortly posterior realization of a reference situation, e.g., *He almost cries*. And the reaching

aspect relates a current dynamic situation to a shortly posterior realization of a reference situation, e.g., *He is becoming conscious.*)

The aspectual marker *kuru* is for both of the continuous and the beginning types (Tables 5 and 6), and the aspectual marker *iku* is for the continuous type only (Table 5). The choice between the two continuous markers is made according to the speaker's conceptualization as to whether the described event continues "from a prior time to the current time" (*kuru*) or "from the current time to the subsequent time" (*iku*). On the other hand, the beginning aspect, by definition, means that the described event changes "from a prior time" (*kuru*), and does not mean that it changes "into the subsequent time" (*\*iku*).

**Table 5:** Japanese AC of continuous type, e.g. (10)

<i>Subject NP</i>	Theme, Experiencer, Actor
<i>Main verb</i>	Process, Emotion, Action (e.g. <i>taeru</i> 'endure')
<i>Aspect marker</i>	Continuous aspect ( <i>kuru</i> , <i>iku</i> )

- (10) *Haha wa tae-te {ki-ta/it-ta}.*  
 mother TOP endure-GER CONT(< come-PRF/go-PST)  
 '(My) mother {has been/continued} enduring hardships.'  
 (Japanese AC, continuous)

**Table 6:** Japanese AC of beginning (inceptive) type, e.g. (11)

<i>Subject NP</i>	Theme, Experiencer
<i>Main verb</i>	Change of state (e.g. <i>akaruku-naru</i> 'become bright')
<i>Aspect marker</i>	Beginning aspect ( <i>kuru</i> )

- (11) *Sora ga akaruku-nat-te ki-ta.*  
 sky NOM become.bright-GER BGN(< come-PRF)  
 'The sky is beginning to become bright.'  
 (Japanese AC, beginning)

Compare (10) and (11). The main verb in the continuous type (10) is a verb of durative aspect (*taeru* 'endure'), while the main verb in the beginning type (11) is a verb of punctual aspect (*akaruku-naru* 'become bright'). The main verb in the continuous type, however, is not always necessarily a durative process/emotion/action verb but possibly a punctual change-of-state or a process/emotion/action verb of any aspect with the iterative- or durative-reading, e.g., *Karera wa nando mo taisen si-te ki-ta.* 'They have competed with each other many times.'



The conceptual metaphor TIME IS SPACE underlies these aspect constructions. Specifically, the continuous type stems from a moving-ego metaphor ACTIVITY IS MOTION (cf. Lakoff 1987: 523); the beginning type comes from a moving-time metaphor CHANGE IS MOTION (cf. Radden 1996: 425).

## 2.4 Stance construction in Japanese

The Japanese stance construction containing the stance marker *kuru* (< *kuru* ‘come’) (Japanese STC) is named the “impact (IPC)” construction (Table 7). A clause included in the impact construction expresses an event (typically, an action event) that makes some impact on the speaker’s mental state. (12) exemplifies this.

**Table 7:** Japanese STC of impact type, e.g. (12)

<i>Clause</i>	Clause representing an event that is, as it were, aimed at the speaker
<i>Stance marker</i>	Impact ( <i>kuru</i> )

- (12) a. *Kare ga haha o odosi-te kuru.*  
 3.SG NOM mother ACC threaten-GER IPC(< come)  
 ‘He threatens (my) mother (and its impact comes).’  
 (Japanese STC, impact)
- b. *Karera wa kakaku o sage-te ki-ta.*  
 3.PL TOP price ACC lower-GER IPC(< come-PRF)  
 ‘They have lowered the price (and its impact has come).’  
 (Japanese STC, impact)

The conceptual metaphor PSYCHOLOGICAL STATE IS SPACE is relevant here (cf. Sawada 2009). To be more specific, the metaphor GIVING IMPACT IS APPROACHING is the basis of this construction. This sort of movement metaphor for stance (i.e. the speaker’s feeling, attitude, belief, assessment, perspective, and the like) is not found in Thai.

Some researchers (Koga and Ohori 2008, Shibatani 2003 *inter alia*) consider this construction to be incorporated in the Japanese voice system, and they call it the “(neutral or malefactive) inverse construction”. In their view, Japanese has a voice system that obligatorily marks for inverse situations where a participant who ranks higher on the person hierarchy (1st > 2nd > 3rd) is affected by an event involving a lower-ranking participant (Shibatani 2006: 247–248). However, I name it the “impact construction”, which is a subtype of the stance construction belonging to the subjectively modified construction. This is because I assume that the chief and essential

function of this construction is to signal the speaker's stance or mental attitude in viewing the event described. In my view, the speaker uses this construction to highlight his/her feeling of unexpectedness or affectedness with respect to the emergence of the event described by the verb that precedes the stance marker *kuru*. The feeling may be neutral or negative (malefactive) depending on the actual speech situation. It is neutral if the speaker is merely astonished at the event described, and it is negative (malefactive) if the speaker is affected by the event described. (N.B., The benefactive marker *kureru/morau* indicates the speaker's positive [benefactive] feeling arising from the event described, e.g., *Karera wa kakaku o sagete kureta*. 'They have lowered the price for us/me.')

### 3 Thai deictic motion constructions

#### 3.1 Single verb construction in Thai

The Thai single verb construction containing *maa* 'come' or *paj* 'go' (Thai SC) (Table 8) and its counterpart in Japanese (Japanese SC) (Table 1) comprise the same main components, namely, a deictic motion verb and its subject noun phrase representing a mover. However, the Thai construction, unlike the Japanese construction, may include an adverbial of the period of stay after coming/going to some place, e.g. *hâa wan* 'for five days' in (13b).

**Table 8:** Thai SC, e.g. (2) and (13)

<i>Subject NP</i>	Mover
<i>Main verb</i>	Deictic motion: coming, going

- (13) a. *Phûan {maa/paj} càak thûi tham ñaan taam sên thaan nî.*  
 friend {come/go} from work.place along route this  
 '(My) friend {came/went} from (his) work place along this route.'  
 (Thai SC, self-motion)
- b. *Phûan maa muan thaj hâa wan.*  
 friend come Thailand for.five.days  
 '(My) friend came to Thailand (and stayed in Thailand) for five days.'  
 (Thai SC, self-motion)

The two spatial prepositions in (13a) (*càak* 'from' and *taam* 'along') have the same forms as motion verbs (*càak* 'leave' and *taam* 'follow' in [4b] and [15a]). Nonetheless, they are considered to function as prepositions. The difference between

prepositions derived from motion verbs (briefly, “verb-like prepositions”; N.B., Thai also has noun-like prepositions such as *bon* ‘on’ [*< bon* ‘upper part’]) and the original motion verbs lies in their syntactic positions as well as their meanings. In a single clause expressing a motion event, the prepositions *càak* ‘from’ and *taam* ‘along’ must occur after a deictic motion verb and take a noun phrase, while the motion verbs *càak* ‘leave’ and *taam* ‘follow’ must appear before a deictic motion verb, if any, and may or may not take a noun phrase (Takahashi 2009). Likewise, the preposition *thǔŋ* ‘to’ must follow the preposition *càak* ‘from’ and take a noun phrase (e.g., *maa càak yǐpùn thǔŋ muan thaj* ‘to come from Japan to Thailand’), while the motion verb *thǔŋ* ‘arrive’ must not follow the preposition *càak* ‘from’ and may or may not take a noun phrase (Takahashi 2005). Furthermore, a negative marker such as *mâj* and *mí?* can appear in front of a verb but not of a preposition. Verb-like prepositions occurring after a deictic motion verb in motion expressions such as (13a) designate static spatial notions of starting-point, relocation route, and end-point as opposed to dynamic motional notions of leaving, following and arriving that are represented by motion verbs. As mentioned above, Thai has two ways of specifying spatial notions of source (starting-point), path (relocation route) and goal (end-point): using (i) case prepositions, e.g. (2c) and (13a), or (ii) serial verbs, e.g. (4b) and (15a). The description with a single motion verb plus verb-like preposition(s) is less dynamic than that with serial motion verbs.

### 3.2 Serial verb construction in Thai

The Thai serial verb construction containing *maa* ‘come’ or *paj* ‘go’ (Thai SVC) can be distinguished into action and motion types, the latter of which subsumes self-motion and caused-motion subtypes.

**Table 9:** Thai SVC of action type, e.g. (14)

<i>Subject NP</i>	Actor
<i>Co-head verbs</i>	Deictic motion: coming, going Action (e.g. <i>khuj</i> ‘chat’)

- (14) *Phôj {maa/paj} khuj kâp mêe.*  
 father {come/go} chat with mother  
 ‘(My) father {came/went} and chatted with (my) mother.’  
 (Thai SVC, action)

The action type (Table 9) uses a deictic motion verb as the initial verb preceding an action verb, e.g. (14). The initial deictic motion verb does not simply denote the

actor's movement of coming/going to some place for conducting a certain activity but rather indirectly expresses his/her intention to conduct the activity at the place. As such, the action type involves metonymy. Expressions of the action type, e.g. (14), originate in the metonymic conceptualization that "coming/going to a place" stands for "coming/going to a place FOR THE PURPOSE of conducting an activity at the place".

The self-motion and the caused-motion types (Tables 10 and 11) may embrace a variety of motion verbs to express a complex motion event, e.g. (15) and (16).

**Table 10:** Thai SVC of self-motion type, e.g. (4a), (4b) and (15)

<i>Subject NP</i>	Mover
<i>Co-head verbs</i>	(i) Manner of motion (e.g. <i>dəən thaən</i> 'travel')
	(ii) Punctual path or direction (e.g. <i>càak</i> 'leave')
	(iii) Durative path (e.g. <i>taam</i> 'follow', <i>ʔɔ̀ɔk</i> 'exit')
	(iv) Deictic motion: coming, going
	(v) Arrival (e.g. <i>thǔn</i> 'arrive')
<i>Object NPs</i>	Source (the object NP of some verbs of [ii] type)
	Path (the object NP of verbs of [iii] type)
	Goal (the object NP of some verbs of [iv] and [v] types)

- (15) a. *Phûan dəən thaən càak yǐpùn taam sên thaən nǐ*  
 friend travel leave Japan follow route this  
*{maa/paj} thǔn muaŋ thaj.*  
*{come/go} arrive Thailand*  
 '(My) friend traveled, left Japan, followed this route, moved {toward/away from} the deictic center, and arrived in Thailand.'  
 (Thai SVC, self-motion)
- b. *Khwaam taay cà? maa yuan naj mâj cháa.*  
 death IRR come visit soon  
 '(His) death is approaching.'  
 (Thai SV, metaphorical self-motion)
- c. *Sǎŋ daŋ ʔɔ̀ɔk {maa/paj} thǔn khâŋ nɔ̀ɔk.*  
 sound be.loud exit {come/go} reach outside  
 'A sound became loud, moved out {toward/away from} the deictic center and reached the outside.'  
 (Thai SVC, emanation of self-motion type)

**Table 11:** Thai SVC of caused-motion type, e.g. (16)

Subject NP	Causer
Co-head verbs	(i) Accompanying/Onset/Handling causation (e.g. <i>khǒn</i> ‘carry’, <i>tè?</i> ‘kick’, <i>duŋ</i> ‘pull’)
	(ii) Manner of motion (e.g. <i>klīŋ</i> ‘roll’)
	(iii) Punctual path or direction (e.g. <i>yǒn</i> ‘turn back’)
	(iv) Durative path (e.g. <i>khūn</i> ‘ascend’, <i>phān</i> ‘pass’, <i>khāw</i> ‘enter’, <i>ʔǒk</i> ‘exit’, <i>lŋ</i> ‘descend’)
	(v) Deictic motion: coming, going
	(vi) Arrival (e.g. <i>yùt</i> ‘halt’)
Object NPs	Mover (the object NP of verbs of [i] type)
	Source (the object NP of some verbs of [iii] type)
	Path (the object NP of verbs of [iv] type)
	Goal (the object NP of some verbs of [v] and [vi] types)

- (16) a. *Phūan khǒn khǒŋ khūn bandaj {maa/paj} chán sǎam.*  
 friend carry thing ascend steps {come/go} third.floor  
 ‘(My) friend carried a thing up along steps and {came/went} to the third floor.’  
 (Thai SVC, caused motion of accompanying type)
- b. *Phūan tè? lūuk bǒn klīŋ yǒn phān pratuu*  
 friend kick ball roll turn.back pass door  
*khāw {maa/paj} yùt nāa tūu.*  
 enter {come/go} halt in.front.of cabinet  
 ‘(My) friend kicked the ball (which) rolled, retraced its way, passed the door, moved in {toward/away from} the deictic center, and halted in front of the cabinet.’  
 (Thai SVC, caused motion of onset type)
- c. *Phūan duŋ phā ʔǒk {maa/paj}.*  
 friend pull cloth exit {come/go}  
 ‘(My) friend pulled the cloth out {toward/away from} the deictic center.’  
 (Thai SVC, caused motion of handling type)
- d. *Phūan sanǎə {maa/paj}.*  
 friend propose {come/go}  
 ‘(My) friend proposed (it, which) moved {toward/away from} the deictic center.’  
 (Thai SVC, metaphorical caused motion of onset type)
- e. *Phūan mǒŋ lŋ {maa/paj}.*  
 friend look descend {come/go}  
 ‘(My) friend looked (and stretched the line of sight, which) moved down {toward/away from} the deictic center.’  
 (Thai SVC, emanation of caused motion type)

None of the co-head verbs listed in Tables 10 and 11 are obligatory, with the exception that an accompanying causation verb (e.g. *khôn* ‘carry’) or an onset causation verb (e.g. *tê?* ‘kick’) needs to be combined with at least one durative path verb (e.g. *khûn* ‘ascend’) or one deictic motion verb (e.g. *paj* ‘go’) to explicitly encode a caused motion event composed of the preceding event of causation and the following event of motion, e.g. (16a) and (16b). Though a deictic motion verb can be unrestrictedly combined with motion verbs of the other types, it tends to be in combination with one of the four common durative-path verbs: *khûn* ‘ascend’, *lon* ‘descend’, *khâw* ‘enter’, or *ʔòk* ‘exit’, e.g. (15c), (16a) to (16c), and (16e). Except for verbs of the arrival type (e.g. *thûn* ‘arrive’, *yùt* ‘halt’), more than one verb from the same type may co-occur in a single clause, e.g., two durative-path verbs *phân* ‘pass’ and *khâw* ‘enter’ are used in (16b). However, there is a constraint on the linear order of motion verbs co-occurring in a single clause: (i) accompanying/onset/handling causation verb, (ii) manner-of-motion verb, (iii) punctual path verb, (iv) durative path verb, (v) deictic motion verb, and (vi) arrival verb must be aligned in this order when co-occurring (Takahashi 2009).

The onset and the handling types of caused motion expressions (16b) to (16e) do not have Japanese mono-clausal counterparts. In Japanese the combination of a handling causation verb and a deictic motion verb does not represent a single event of caused motion (e.g., \* *Kare wa nuno o hiki-dasi-te {kuru/iku}*. ‘[intended meaning] He pulls the cloth out {toward/away from} the deictic center.’), though it is acceptable for the bi-clausal reading (e.g., *Kare wa nuno o hiki-dasi-te {kuru/iku}*. ‘He pulls the cloth out and then {comes/goes}.’).

Notice that Thai deictic motion constructions for complex motion may serve as figurative expressions for events of proposal, transaction, vision, audition, dying, and the like, in which an abstract moving-entity is detectable. The typical metaphorical motion expression (15b) (*Khwaam taay câ? maa yuan naj mâj cháa* ‘His death is approaching’) is based on the moving-time metaphor CHANGE IS MOTION. Unlike (15b), (16d) (*Phûan sanăa {maa/paj}* ‘My friend proposed [it, which] moved {toward/away from} the deictic center’) does not depict a metaphorical motion proper. Rather, the deictic motion verb in (16d) only encodes an abstract direction toward an implicit receiver of the proposal. At any rate, (16d) is a metaphorical motion expression since it involves a moving-ego metaphor ACTIVITY IS MOTION. On the other hand, (15c) (*Sīaŋ daŋ ʔòk {maa/paj} thûn khâw nôk* ‘A sound became loud, moved out {toward/away from} the deictic center and reached the outside’) and (16e) (*Phûan mɔŋ lon {maa/paj}* ‘My friend looked [and stretched the line of sight, which] moved down {toward/away from} the deictic center’) are of a different nature. They are “emanation” fictive motion expressions, or in short, emanation expressions (Talmy 2000: 105–116). Emanation is fictive motion of an intangible entity which is imagined to emerge from a source entity and steadily move on relative to a reference entity (e.g., *The arrow on the signpost pointed {toward/away from/into/past} the town* [Talmy 2000: 109]; *I quickly looked down into the well* [Talmy 2000:

111]). The function of emanation is to create a conventional setting for the predication of entities around us by spatially connecting them to each other. Emanation expressions are linguistic realizations of such conventional cognitive impositions of emanation. Our motivation to use emanation expressions is the need to spatially and globally relate, by means of the fictive path of emanation, entities that otherwise are disconnected, and further to convey to others our experiences and ideas about relationships among the entities. While emanation expressions in Japanese do not so often contain a deictic motion verb (e.g., *Yajirusi ga kita o muku* ‘The arrow points to the north’; *Tomodati wa mi-age-ta* ‘My friend looked [and lifted the line of sight] up’), those in Thai mostly utilize a deictic motion verb to indicate in which direction an intangible entity moves, viewed from the speaker’s viewpoint (the deictic center) (e.g., *Lûuk sǎn chûi paj thaən nûa* ‘The arrow points [and the focus of attention] moves away from the deictic center to the north’; *Phûan mǎw khûn {maa/paj}* ‘My friend looked [and stretched the line of sight, which] moved up {toward/away from} the deictic center’). It follows that Thai speakers largely designate events of emanation in the “relative frame of reference” (Levinson 1996: 142–145). It is the speaker’s conceptualization regarding the self-motion type (15c) that the loud sound moves toward or away from the deictic center. As for the caused-motion type (16e), the speaker conceptualizes that the friend’s line of sight is set in motion toward or away from the deictic center. Such emanation events viewed from the speaker’s vantage point, especially those of sound, of line-of-sight, of odor, of stream-of-air, of light, of shadow, and of focus-of-attention, are frequently and variously verbalized in Thai (Takahashi 2000).

### 3.3 Aspect construction in Thai

The Thai aspect construction containing the aspectual marker *maa* (< *maa* ‘come’) or *paj* (< *paj* ‘go’) (Thai AC) expresses three types of aspect: (i) “continuous aspect (CONT)” (static/dynamic situation that continues); (ii) “inceptive aspect (INC)” (situation that begins); and (iii) “perfect aspect (PRF)” (past situation that has present relevance). The aspectual marker *maa* encodes all the three types; the aspectual marker *paj* the first two types. (N.B., *Maa* is not a full-fledged perfect marker [Tiengburanathum 2013: 832]. It functions as a perfect marker only in rather limited cases.) Similar to the Japanese cases discussed in Section 2.3, the conceptual metaphor TIME IS SPACE is applicable to these aspectual notions. The continuous and the perfect aspects are derived from the moving-ego metaphor ACTIVITY IS MOTION and the inceptive aspect from the moving-time metaphor CHANGE IS MOTION. Tables 12 to 14 show main components of the construction of each aspect type.

**Table 12:** Thai AC of continuous type, e.g. (17)

<i>Subject NP</i>	Theme, Experiencer, Actor
<i>Main verb</i>	Process, Emotion, Action (e.g. <i>ɔ̀t thon</i> ‘endure’)
<i>Aspect marker</i>	Continuous aspect ( <i>maa, paj</i> )

- (17) a. *Mêɛ ɔ̀t thon maa naan.*  
 mother endure CONT(< come) for.a.long.time  
 ‘(My) mother has been enduring hardships for a long time.’  
 (Thai AC, continuous)
- b. *Mêɛ càʔ ɔ̀t thon paj talòt.*  
 mother IRR endure CONT(< go) forever  
 ‘(My) mother will continue enduring hardships forever.’  
 (Thai AC, continuous)

**Table 13:** Thai AC of inceptive type, e.g. (18)

<i>Subject NP</i>	Theme, Experiencer, Actor
<i>Main verb</i>	Change of state (e.g. <i>pĕian</i> ‘change’, <i>phlòo</i> ‘emerge’, <i>hăaj</i> ‘disappear’)
<i>Aspect marker</i>	Inceptive aspect ( <i>maa, paj</i> )

- (18) a. *Man pĕian {maa/paj}.*  
 3.SG change INC(< come/go)  
 ‘It changed.’ (Thai AC, inceptive)
- b. *Man phlòo khûn maa.*  
 3.SG emerge ascend INC(< come)  
 ‘It emerged.’ (Thai AC, inceptive)
- c. *Man hăaj paj.*  
 3.SG disappear INC(< go)  
 ‘It disappeared.’ (Thai AC, inceptive)

**Table 14:** Thai AC of perfect type, e.g. (19)

<i>Subject NP</i>	Actor
<i>Main verb</i>	Action (e.g. <i>kin</i> ‘eat’)
<i>Aspect marker</i>	Perfect aspect ( <i>maa</i> )



(19) *Chán kin khâaw maa.*

1.SG eat rice PRF(&lt; come)

'I have eaten a meal.' (Thai AC, perfect)

The main verb of the continuous type denotes an event of process/emotion/action, e.g. (17). That of the inceptive type encodes an event of change of state, e.g. (18a). If the change is a kind of appearance (i.e. to become perceptible and known), only *maa* (< *maa* 'come') is available, e.g. (18b). Conversely, if it is a kind of disappearance (i.e. to become imperceptible and unknown), only *paj* (< *paj* 'go') is available, e.g. (18c). And the main verb of the perfect type expresses an event of action in general, e.g. (19).

### 3.4 Stance construction in Thai

The Thai stance construction containing the stance marker *paj* (< *paj* 'go') (Thai STC) is called the "evaluation (EVL)" construction. Its main components are shown in Table 15. The speaker uses this construction to describe excessiveness in terms of quantity or quality. In particular, the stance marker *paj* signals the speaker's negative evaluation of an excessive state or an inappropriate behavior by the referent of the subject noun phrase. For example, the speaker of (20a) evaluates that the referent of the subject noun phrase is overpriced. Example (20b) implies the speaker's self-evaluation that his/her behavior (doing something because of aversion) was abnormal and/or inadequate. Expressions like those in (20) are based on the conceptual metaphor VALUE SYSTEM IS SPACE, or more specifically, DEVIATION FROM ADEQUACY IS DEPARTURE FROM SOURCE (cf. Clark 1974). Japanese is lacking in this particular movement metaphor for stance.

**Table 15:** Thai STC of evaluation type, e.g. (20)

<i>Subject NP</i>	Theme
<i>Main verb</i>	State (e.g. <i>phɛɛŋ</i> 'be expensive'); Action (e.g. <i>tham</i> 'do')
<i>Stance marker</i>	Evaluation ( <i>paj</i> )

(20) a. *Man phɛɛŋ (kəən) paj.*

3.SG be.expensive (exceed) EVL(&lt; go)

'It is too expensive.' (Thai STC, evaluation)

b. *Chán tham paj phrɔʔ klɪat thəə.*

1.SG do EVL(&lt; go) because hate 2.SG

'I did (it) because (I) hate you.' (Thai STC, evaluation)

## 4 Comparison between the uses of deictic motion verbs in Japanese and in Thai

Table 16 summarizes the range of verbal and functional uses of Japanese and Thai deictic motion verbs. The number of the uses of the Japanese verbs (*kuru* ‘come’ and *iku* ‘go’) is smaller than that of the Thai verbs (*maa* ‘come’ and *paj* ‘go’). The Japanese verbs have six different uses in total (three verbal and three functional uses); the Thai verbs have nine different uses in total (five verbal and four functional uses). There are four uses common to both languages: (i) the verbal use for self-motion, e.g. (1) and (2); (ii) the verbal use for caused motion of the accompanying type, e.g. (8) and (16a); (iii) the verbal use for caused motion of the onset type, e.g. (9) and (16b); and, (iv) the functional use for continuous aspect, e.g. (10) and (17).

**Table 16:** The uses of deictic motion verbs in Japanese and in Thai

	<i>kuru</i> ‘come’ in Japanese	<i>iku</i> ‘go’ in Japanese	<i>maa</i> ‘come’ in Thai	<i>paj</i> ‘go’ in Thai
<Verbal uses>				
a. Self-motion	✓ (1a)	✓ (1b)	✓ (2a)	✓ (2b)
b. Caused motion:				
Accompanying	✓ (8)		✓ (16a)	✓ (16a)
Onset	(✓) <sup>†</sup> (9)		✓ (16b)	✓ (16b)
Handling			✓ (16c)	✓ (16c)
c. Locomotion to a place for the purpose of conducting an activity at the place			✓ (14)	✓ (14)
<Functional uses>				
a. Aspect:				
Continuous	✓ (10)	✓ (10)	✓ (17a)	✓ (17b)
Perfect			✓ (19)	
Beginning (Inceptive)	✓ (11)			
Inceptive			✓ (18a)	✓ (18a)
b. Stance:				
Impact	✓ (12)			
Evaluation				✓ (20)

<sup>†</sup> The sign “(✓)” means that not all causation verbs of the onset type are compatible with the subsidiary verb *kuru* ‘come’.

The most significant difference between the deictic motion verbs of the two languages is that the Thai verbs quite frequently express a caused motion of the onset and the handling types, e.g. (16b) to (16e), while the Japanese verbs do not freely encode a caused motion of the onset type and cannot denote a caused motion of

the handling type. What is more, the Thai verbs readily represent emanation fictive motions, too, e.g. (15c) and (16e) (see Table 17).

Regarding the aspect constructions, only the continuous type is used in common between the two languages. Japanese does not have the perfect and the inceptive types, whereas Thai lacks for the beginning type which is a subtype of inceptive aspect. Considering that the two languages each have their own means to indicate the types of aspect, this dissimilarity makes sense. On one hand, Japanese has no particular functional morphemes for inceptive and perfect aspects. These two aspects are covertly and ambiguously expressed with the perfect-aspect form of Japanese verbs, e.g., *Sore wa kawat-ta*. '(inceptive aspect reading) It changed.'; *Watasi wa gohan o tabe-ta*. '(perfect aspect reading) I have eaten.' The beginning aspect in Thai, on the other hand, is overtly and specifically expressed by a particular aspect marker, e.g. *chák (cà?)* ... 'to be beginning to ...'.

The Japanese stance marker *kuru*, which originates from the venitive verb *kuru* 'come', indirectly indicates the speaker's feeling of unexpectedness or affectedness resulting from an occurrence of some event. This modal interpretation of *kuru* is ascribed to the metaphor GIVING IMPACT IS APPROACHING. This metaphor, however, does not hold for Thai expressions of unexpectedness or affectedness. In Thai, a more objective sense of affectedness on the part of an event-participant can be metaphorically expressed. Thai expressions of rather objective affectedness involve either of the following two metaphors: GIVING IMPACT IS PUTTING IN and GIVING IMPACT IS TAKING CONTROL. Hence, metaphorical expressions with the action verb *sàj* 'put in', e.g., *Mêe takoon sàj nâa phôo*. '(My) mother roared and put the roar into (my) father's face; (My) mother roared at (my) father's face.'; those with the action verb *ʔaw* 'take, obtain', e.g., *Mêe dâa ʔaw*. '(My) mother abused (him) and took (control of him, and so he became the target of her severe abusing).' Unlike the Japanese venitive verb *kuru* 'come', the Thai venitive verb *maa* 'come' has nothing to do with the subjective sense of unexpectedness or affectedness on the part of the speaker.

The Thai stance marker *paj*, which derives from the andative verb *paj* 'go', reflects the speaker's negative evaluation with regard to an excessive state of something or an inappropriate behavior by someone. The metaphor DEVIATION FROM ADEQUACY IS DEPARTURE FROM SOURCE is involved in the modal interpretation of *paj*. In Japanese, there exists a similar metaphor DEVIATION FROM ADEQUACY IS MOVING BEYOND GOAL, which is expressed by compound verbs that consist of the root of an adjective (or a verb in the adverbial form) and the motion verb *sugiru* 'pass by, go past', e.g., *taka-sugiru* 'to be too expensive'.

Finally, let me give an overview of metaphorical or fictive motions (non-physical motions, exclusive of aspectual notions) that can be expressed by deictic motion verbs in the two languages. Obviously, the verbs' ability to express metaphorical or fictive motions varies, as shown in Table 17.

**Table 17:** Metaphorical or fictive motions expressed by Japanese and Thai deictic motion verbs

	<i>kuru</i> 'come' in J.	<i>iku</i> 'go' in J.	<i>maa</i> 'come' in T.	<i>paj</i> 'go' in T.
a. Metaphorical motion:				
CHANGE IS MOTION	✓ (6c)		✓ (15b)	
ACTIVITY IS MOTION		✓ (6d)	✓ (16d)	✓ (16d)
GIVING IMPACT IS APPROACHING	✓ (12)			
DEVIATION FROM ADEQUACY IS DEPARTURE FROM SOURCE				✓ (20)
b. Fictive motion:				
Emanation of self-motion type			✓ (15c)	✓ (15c)
Emanation of caused-motion type			✓ (16e)	✓ (16e)

The Japanese and Thai venitive verbs, *kuru* and *maa*, can appear in expressions of metaphorical motion involving the moving-time metaphor CHANGE IS MOTION, e.g. (6c) and (15b). The Japanese and Thai andative verbs, *iku* and *paj*, and also the Thai venitive verb *maa* can occur in expressions of metaphorical motion involving the moving-ego metaphor ACTIVITY IS MOTION, e.g. (6d) and (16d). As explained earlier, the venitive sense of the Japanese verb *kuru* is related to the psychological metaphor GIVING IMPACT IS APPROACHING, e.g. (12), and the andative sense of the Thai verb *paj* pertains to the value-related metaphor DEVIATION FROM ADEQUACY IS DEPARTURE FROM SOURCE, e.g. (20). Of particular interest is the fact that only the Thai deictic motion verbs, *maa* and *paj*, may manifest themselves in emanation expressions as the indicator of the relative position of the speaker's vantage point, e.g. (15c) and (16e).

## 5 Concluding remarks

In the present chapter I examined the Japanese and Thai deictic motion constructions of the mono-clausal type. I laid out all the syntactic and semantic types of the constructions. I also elaborated on the different types of metaphors involved in the semantics of the constructions. This chapter has shown that although the functions of deictic motion verbs in Japanese are seemingly similar to those in Thai, actually the uses of the Japanese verbs are less diverse compared to the uses of the corresponding verbs in Thai (cf. Tables 16 and 17 in Section 4). Due to the functional differences between the deictic motion verbs of the two languages, translating a Japanese deictic motion construction into Thai and vice versa is by no means straightforward.

The way of anchoring a motion event to the deictic center is another issue in which we might expect to find other significant differences existing between the two languages. This is, however, an issue for future research.

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# 11 Event integration patterns in Sidaama and Japanese

## 1 Introduction

This chapter examines how Sidaama, a Cushitic language of Ethiopia, and Japanese express complex events in Talmy's (1985, 1991, 2000) theory of lexicalization and event integration, and compares their typological properties.

Talmy argues that there is a class of complex events called “macro-events”, which tend to be conceptualized as a single event and expressed with a single clause across different languages. According to his typology of event integration, languages are classified based on the patterns in which different types of components of such complex events are conflated with different types of grammatical categories. “Verb-framed languages” typically encode in the main verb the core-schematic components of main or “framing” events, called ‘association function’ components (e.g. a path in a motion event), and express event components supporting these components (“co-event” components (e.g. a manner or cause in a motion event) in adverbials or converbs. “Satellite-framed” languages, by contrast, characteristically use particles or prepositional phrases as satellites to express core-schematic event components, and encode supporting event components in the verb root. Talmy claims that this contrast is found across the five event domains of motion, state change, realization, temporal contouring, and action correlation (or action correlating in Talmy's terminology). These domains are illustrated by the English examples in (1), taken from Talmy (2000: 214). (The satellite in each example is in boldface.)

- (1) a. Motion: *The ball rolled **in**.*
- b. State change: *I blew **out** the candle.*
- c. Realization: *The police hunted the fugitive **down**.*
- d. Temporal contouring: *They talked **on**.*
- e. Action correlation: *I sang **along** with him.*

Talmy's typology has attracted considerable attention particularly with respect to the domain of motion, and a large number of crosslinguistic studies on this domain have been conducted to test its validity (e.g. Slobin 2004; Croft et al. 2010; Matsumoto this volume). The other four domains of state change, realization, temporal contouring, and action correlation, however, have been much less studied. Of course, an empirical question to ask is whether Talmy's theory of event integration

and lexicalization has a cross-linguistic validity across the five domains. However, because it is already known that there are languages where Talmy's hypothesis does not work across all the domains, a more important question is why it does not in such languages. Kawachi (2012) looked at Sidaama, and found that although this language has many properties of a verb-framed language, it does not consistently follow the verb-framed pattern across all the five domains. Similar disparities of conflation patterns are observed by subsequent studies on other African languages such as Abe (2016) on Bende (Bantu F12, Niger-Congo; Tanzania), Hieda (2016) on Kumam (Western Nilotic, Nilo-Saharan; Uganda), Kawachi (2016a, 2016b) on Kupsapiny (Southern Nilotic, Nilo-Saharan; Uganda), Koga (2016) on Akan (Kwa, Niger-Congo; Ghana), Komori (2016) on Yoruba (Yoruboid, Niger-Congo; Nigeria), Wakasa (2016) on Amharic (Ethio-Semitic, Afro-Asiatic; Ethiopia), Yoneda (2016) on Herero (Bantu R31, Niger-Congo; Namibia and Botswana), and Yoshino (2016) on 'Ale (East Cushitic, Afro-Asiatic; Ethiopia). None of these languages exhibits a single typological pattern consistently; instead, all of them including Sidaama utilize multi-verb constructions that express a co-event and an association function in this order when they express events in the five event domains, though their construction types vary greatly from language to language.

These studies have brought to light that African languages bear similarities to Japanese in terms of event integration. Focusing on Sidaama, the present chapter compares systematically its patterns of expressing complex events in the five event domains with those of Japanese, and points out that both languages characteristically use multi-verb constructions for at least events whose components can be analyzed as being arranged in their temporal order. It is thus shown that although the two languages exhibit a fairly persistent verb-framed pattern in the event domains of motion, state change, and realization, they both depart from this pattern in expressing many types of temporal contouring and action correlation, to which the temporal order of "a co-event followed by an association function" does not necessarily apply, and for which the multi-verb constructions expressing event components in their temporal order cannot be used. Thus, Japanese and Sidaama are different from those languages that Talmy argues display their characteristic pattern across all or most of the five different event domains, and that do not follow the order of a co-event followed by an association function, for example, Romance languages. This chapter also speculates on the factors that make Japanese and Sidaama, which are geographically and genealogically distinct, look similar.

The rest of the chapter is organized as follows. Following a brief sketch of Sidaama grammar in Section 2, Section 3 provides an overview of Talmy's typology of event integration with special reference to recent findings in Kawachi (2016a). Section 4 presents data on event integration patterns in Sidaama and Japanese. Section 5 analyzes the data, and discusses typological issues. Section 6 concludes the chapter.



## 2 A brief sketch of Sidaama multi-verb constructions

Sidaama is spoken in the Sidaama Zone of South-Central Ethiopia, and belongs to the Highland-East branch of the Cushitic language family of the Afro-Asiatic language phylum (Kawachi 2007). It has a nominative-accusative case system with agglutinative morphology. The basic word order is SOV, though other orders are also possible in certain discourse contexts. Finite verbs inflect for aspect or mood as well as for the person-number(-gender) of the subject (and optionally for those of the object), as in (2). The aspectual suffixes have different forms depending on the person (and number) of the subject.

- (2) *íse mančó t'on-t-inó(-si).*  
 3SG.F.NOM person.ACC.OBL insult-3SG.F-D.PRF.3(-3SG.M)  
 without -*si*: 'She insulted the person.'/with -*si*: 'She insulted the man.'

Inflectional suffixes that non-finite verbs can carry include the converb suffix *-e* and the infinitive suffix *-a* as well as the subject person-number(-gender) suffix.<sup>1</sup>

Sidaama has two multi-verb constructions, the converb construction in (3a) and the simultaneity construction in (3b).<sup>2</sup>

- (3) a. Converb construction: V1-PERS.NUM(.GENDER)-*e* V2 (finite)  
 b. Simultaneity construction: V1-PERS.NUM(.GENDER)-*a-nni* V2 (finite)

In both constructions, the converb or the infinitive verb (referred to as 'V1' henceforth) and the main verb ('V2' henceforth) must share the same subject, and V1 normally precedes V2, which requires at least the subject's person-number suffix and either an aspectual suffix (and the subject gender suffix as well in the case of the first- and second-person singular) or a mood suffix.<sup>3</sup> In the converb construction, V1 is accompanied by the subject person and number suffix and the converb suffix *-e*. In the simultaneity construction, V1 is accompanied by the subject person and number

<sup>1</sup> Thus, such verbs are not perfectly non-finite. Nevertheless, they are treated as non-finite because they are still not finite in that they normally cannot be the only verb of a sentence.

<sup>2</sup> The term 'converb' is sometimes used in the literature on Ethiopian languages for both types of constructions. However, the present study regards only (3a) as a converb construction, but does not call (3b) so because (3b) cannot connect more than two verbs, unlike (3a).

<sup>3</sup> If V1 and V2 have different subjects, the constructions take the forms in (i), where *=nna* means 'and' or 'while'. In (i-a), the vowel of the converb is lengthened.

- (i) a. Converb construction: V1-PERS.NUM(.GENDER)-*e-e=nna* V2 (finite)  
 b. Simultaneity construction: V1-PERS.NUM(.GENDER)-*a=nna* V2 (finite)

suffix, the infinitive suffix *-a*, and the ablative-instrumental/manner suffix *-nni*. The most basic use of the converb construction is that for two or more events or event components in their temporal sequence, whereas the most basic use of the simultaneity construction is that for two events or event components occurring simultaneously. Examples are shown in (4a) and (4b). In fact, both constructions have subconstructions, and (4a) and (4b) are instances of those with the loosest linkage.

- (4)
- |            |                      |   |     |                       |
|------------|----------------------|---|-----|-----------------------|
| <i>íse</i> | <i>waasá</i>         | { | (a) | <i>it-t-e</i> ,       |
| 3SG.F.NOM  | <i>waasa.ACC.OBL</i> |   |     | eat-3SG.F-CVB         |
|            |                      |   | (b) | <i>it-t-á-nni</i> ,   |
|            |                      |   |     | eat-3SG.F-INF-ABL.INS |

*buná*                      *ag-g-inó*.  
 coffee.ACC.OBL    drink-3SG.F-D.PRF.3

(a) ‘She ate *waasa* (fermented false banana bread), and drank coffee.’

(b) ‘While eating *waasa*, she drank coffee.’

When one examines event integration patterns, there is a question of what range of events should be treated as a macro-event, that is, how to define a single event and a single clause. In a context different from Talmy’s typology of event integration, Bohnemeyer et al. (2007) and Bohnemeyer and Van Valin (2017) define the “macro-event property” of an expression, which does not necessarily correspond to Talmy’s characterization of a macro-event, in terms of the scope of negation and that of a temporal adverbial. Thus, according to them, macro-event expressions usually have a single verbal core, which consists of the nucleus (the predicate) and its arguments, but can have multiple verbal cores if they constitute a superordinate verbal core, and are within the scope of a closed-class core operator (e.g. negation, modality) and a core periphery (in other words, if the construction is core cosubordination in Role and Reference Grammar (Van Valin and LaPolla 1997; Van Valin 2005)). This seems to be an intuitively valid criterion for the description of a single event with a single clause. Nevertheless, the present study loosens this criterion, and still employs the traditional notion of a clause, on which Talmy’s typology of event integration is presumably built. Thus, it takes into account any expression that uses a single clause regardless of the number of cores and the relation between them. The present study may include less integrated constructions like (4a) and (4b), which Bohnemeyer and Van Valin (2017) would not regard as macro-event expressions, but it has the advantage of defining a clause purely morpho-syntactically, without resorting to semantics. In fact, in the case of the Sidaama multi-verb constructions, they each take distinct forms depending on whether the verbs share the same subject or have different subjects.

### 3 Talmy's typology of event integration

This section introduces Talmy's (1985, 1991, 2000) theory of event integration. According to this theory, the cognitive process of event integration is the conceptual integration or conflation of an event as unitary that, more analytically, would be conceptualized as complex. In language, this process emerges as the expression of an event in a single clause that, more analytically, would be expressed by means of a more complex syntactic structure. An exemplary case is found in motion events. (5a), for example, presents a motion event analytically using the two verbs *go* and *roll*, whereas (5b) expresses the same event with a single main verb *roll*, which conflates motion and the 'rolling' manner (Talmy 2000: 30).

- (5) a. *The rock went down the hill, rolling in the process.*  
 b. *The rock rolled down the hill.*

Talmy argues that although languages can differ as to what can be conceptualized as a single event and expressed in a single clause, there is a class of events that tend to be recurrently conceptualized as single events and expressed in single clauses across languages. Such events are called macro-events.

A macro-event is made up of two major components, a framing event (e.g. *the rock's moving down the hill* in (5b)) and a co-event (e.g. *roll* in (5b)), as well as the support relation of the co-event to the framing event (e.g. the manner relation in (5b)). The framing event, which is the main event of a macro-event, consists of (i) a figural entity, (ii) a ground entity, (iii) an association function, the core-schematic component of a framing event, which associates the figural entity to the ground entity, and (iv) an activation process, which has the value of transition or fixity. The association function constitutes a core schema by itself (or together with the ground entity). In (5b), for example, the figure entity is the rock, the ground entity is the hill, the association function is the path along which the rock moves, and the activation process is motion (rather than locatedness).

As mentioned in Section 1, Talmy hypothesizes that his typology of event integration applies to five event domains: motion, state change, realization, temporal contouring, and action correlation. Because the names of the last three domains (realization, temporal contouring, and action correlation) are not very commonly used in the literature, they need clarification. Realization, which could be analyzed as a special type of (agentive) state-change event (Talmy 2000: 271), concerns the fulfillment of a goal that the agent intends to achieve, or the confirmation of the fulfillment of the goal that is only implicated. Talmy (2000: 261–263) discusses four verbal patterns involving realization events. Examples of the four patterns are shown in (6)–(9) – the so-called “resultative constructions” (cf. Kageyama and Shen this volume).

- (6) a. *I kicked the hubcap.*  
       b. *I kicked the hubcap **flat**.*
- (7) a. *The police hunted the fugitive.*  
       b. *The police hunted the fugitive **down**.*
- (8) a. *I washed the shirt.*  
       b. *I washed the shirt **clean**.*
- (9) a. *I drowned him.*  
       b. *\*I drowned him **dead**.*

A first type of verb is an intrinsic-fulfillment verb, which is lexicalized to express the performance of the action as the scope of the agent's intention. For example, the verb *kicked* in (6a) only expresses the action, but the realization of the framing event (the hubcap's state change of becoming flat) in (6b) is beyond the scope of the intention of the agent expressed by the verb *kick*. A second type of verb is a moot-fulfillment verb where the scope of the agent's intention includes the performance of the action and a goal, though whether or not the intention to attain the goal was fulfilled is left moot. For example, the agent's goal of realizing the event (capturing the fugitive) is included in the event expressed by the verb *hunt* in (7a), but the use of *hunt* alone in this sentence is neutral as to whether or not the goal has been attained. Only with the satellite *down* as in (7b) can the attainment of the goal be confirmed. A third type of verb is an implied-fulfillment verb, which is lexicalized to express not only the performance of the action and a goal, but also the implicature of the agent's fulfillment of the goal. For example, the verb *wash* in (8a) implies the fulfillment of the agent's goal of making the shirt clean, and the fulfillment can be confirmed in (8b). The fourth type of verb is an attained-fulfillment verb, which expresses the agent's fulfillment of the goal, rather than the implicature of the agent's fulfillment of the goal, in addition to the performance of the action and a goal. For example, the verb *drown* in (9a) asserts that the agent's goal of killing him has been attained, and no other element like *dead* is necessary to confirm it, as in (9b).

Temporal contouring, which is aspect conceptualized as a macro-event, consists of various aspectual categories (e.g. completion/termination, repetition). According to Talmy (2000), the framing event of temporal contouring has one of the following two types of structures. First, in aspectual types such as "starting", "stopping", "continuing", "remaining manifested", "iterating", "intensifying", and "tapering off", the figure is the degree of manifestation of an event, namely whether or not an event is manifested, and if manifested, how it is manifested, and the ground is a

Table 1: Components of macro-events in the five event domains in Talmy's framework

event component  event domain	Macro-event							
	(Agent causal chain)						Support relation of co-event	Co-event
	Framing event		Core schema		Association function	Activation process		
	Figural entity	Ground entity	Ground entity					
Motion	figure	ground	path	transition type (entry into a state, depar- ture from a state, lack of transition)	motion/locatedness	manner, cause, etc.	e.g. 'roll' in (10)-a	
State change	object or situation	property		(confirmation of (the implicature of)) the fulfillment of the agent's goal	change/stasis	manner, cause, etc.	e.g. 'blow' in (10)-b	
Realization	the agent's intention	stages or degrees of realization			transition caused by the agent	cause	e.g. 'hunt' in (10)-c	
Temporal contouring	degree of manifesta- tion of an event	points or periods of time	temporal contour	aspect (e.g. continua- tion, completion, repetition)	progression through time	constitutiveness	e.g. 'talk' in (10)-d	
Action correlation	one agent's action	usually, another agent's (an agency's) same or same- category action		correlation of one action with respect to another	the agent's estab- lishment of the correlation	constitutiveness	e.g. 'sing' in (10)-e	

particular point in time or a period of time. For example, in (1d) *They talked on*, the figure is the full manifestation of the event, the ground is an unspecified period of time, the association function is continuation, and the co-event is their talking. On the other hand, in the aspectual type of “finishing”, the figure is an affected object, the ground is temporal contour, and the association function is the direction of the relation between the figure and the ground. For example, in the English sentence *I wrote the letter to completion*, where the figure, the letter, is affected in a way that it is agentively “moved” to completion with the co-event of me writing, and the core schema is made up of a positive direction of association and a terminative temporal contour. Whichever of the structures the framing event may have, the support relation that the co-event has in relation to the framing event is “a constitutive relation, in effect “filling in” the conceptual region outlined by the temporal contour” (Talmy 2000: 232).

Action correlation concerns what Talmy (2000: 253) calls “coactivity”, where one agent performs an activity in correlation with a (usually) same-category action performed by another entity, an agency (either animate or inanimate). In a macro-event of action correlation, the co-event is in a constitutive support relation to the framing event; the figure is the agent’s action and the ground is the agency’s same or same-category action (or the agency’s complementary action in the case of ‘demonstration’). There are five types of action correlation: ‘concert’, ‘accompaniment’, ‘imitation’, ‘surpassment’, and ‘demonstration’. In the first four, the agent and the agency perform the same or same-category actions, whereas in ‘demonstration’, they perform different-category actions. Table 1 (Kawachi 2016a) summarizes the components of macro-events in the five event domains.

According to Talmy’s typology of event integration, languages are distinguished into two major types: verb-framed languages (e.g. Romance languages) and satellite-framed languages (e.g. Germanic languages). As shown in Table 2 (Kawachi 2016a), verb-framed languages typically encode the association function in the main verb (framing verb), and express a co-event component in an adverbial (or a non-main verb), whereas satellite-framed languages characteristically use a satellite (framing satellite) for the association function, and encode the co-event component in the verb root. Here, the satellite, which may be either a bound affix as in German verb prefixes or a free word as in English verb particles, is “the grammatical category of any constituent other than a nominal or prepositional-phrase complement that is in a sister relation to the verb root” (Talmy 2000: 222).

**Table 2:** A synopsis of Talmy’s typology of event integration

	Association function (core-schematic component of framing event)	Co-event
Verb-framed languages	main verb root	adverbial, non-main verb
Satellite-framed languages	satellite	main verb root

Talmy hypothesizes that the verb-framed vs. satellite-framed distinction holds for all the five event domains, as exemplified by examples in (10) from English, a dominantly satellite-framed language, and from Spanish, a verb-framed language. In the English examples, satellites are boldfaced, while in the Spanish examples, framing verbs are. No Spanish example is provided for (10c) because this language uses two clauses for such an event.<sup>4</sup>

- (10) a. Motion  
*The ball rolled **in**.* / *La pelota **entró** rodando.* ‘The ball entered, rolling.’
- b. State change  
*I blew **out** the candle.* / ***Apagué** la vela {soplándola/de un soplo}.*  
 ‘I extinguished the candle, blowing on it/with a blow.’
- c. Realization  
*The police hunted the fugitive **down**.*
- d. Temporal contouring  
*They talked **on**.* / *Ellos **siguieron** hablando.* ‘They continued talking.’
- e. Action correlation  
*I sang **along** with him.* / *Yo lo **acompañé** cantando.* ‘I sang along with him.’

Especially for the domain of motion, various cases where a language does not fit well into either typological type have been reported in the literature (e.g. Aske 1989, Croft et al. 2010). However, Talmy never claimed that every language has to be clearly classified into either typological type or uses only one type of construction consistently across the five domains, but he himself was aware that individual languages could each have typologically diverse constructions, and might have such systems as a split system of conflation, a parallel system of conflation, and an intermixed system of conflation (Talmy 2000: 64-67). In a split system, a language uses one typological pattern for one type of event, and uses another typological pattern

<sup>4</sup> A better V-framed example of realization is (i) from Tamil (Talmy 2000: 278). This sentence expresses the confirmation of the fulfillment of the agent’s goal with the verb for killing unlike (ii), which does not necessarily. Thus, the sentence for ‘But he didn’t die’ cannot follow (i), though it could (ii).

- (i) *Nān avaṇai koṇru-(vi)ṭṭēṇ.*  
 I him kill(NON-FINITE)-leave(FINITE)-PST.1SG  
 ‘I killed him.’
- (ii) *Nān avaṇai koṇrēṇ.*  
 I him kill.PST.1SG  
 ‘I “killed” him.’

for another type of event. In a parallel system, a language uses different typological patterns in expressing the same type of event; these patterns are nearly equally colloquial. Finally, in an intermixed system, a language intermixes different typological patterns rather randomly.

While there are numerous language-specific or cross-linguistic studies on motion events that are based on Talmy's framework, there are only a small number of studies that dealt with data on the non-motional domains or all of the five domains in a particular language or across languages under his framework. It is thus an empirical question whether a particular set of typological properties can be consistently found in the five event domains as a holistic principle in individual languages. However, as mentioned earlier, Talmy already noticed that a language may exhibit different typological patterns depending on various factors. Moreover, the present author and his colleagues already found such inconsistent behavior in African languages. Thus, the present study investigates the reason for it by comparing Sidaama and Japanese, which are geographically and genealogically distant from each other. The subsequent section examines data in Sidaama and Japanese in order to address this issue later.

## 4 Comparison of event integration patterns in Sidaama and Japanese

As mentioned earlier, the present author (Kawachi 2012) looked at Sidaama under Talmy's framework, and found that it follows the verb-framed language pattern very closely in motion, state change, and realization, but only to some extent in temporal contouring and to a limited extent in action correlation; thus, Sidaama deviates from the verb-framed language pattern in these domains, unlike Spanish, which uses the gerundive or a prepositional phrase for a co-event after the main verb. There may be a subtype of verb-framed language different from Romance languages, but the reason for this was not clear.

Recently, the present author (Kawachi 2016a) further examined event integration patterns in ten African languages with the help of his collaborators, and found that all of these languages, which display different typological properties, have multi-verb constructions that express a co-event and an association function (the core-schematic component of a framing event) in this order (what may be called "temporal sequence constructions") (e.g. the converb construction in Sidaama, the consecutive construction in Bantu languages, the serial verb construction in non-Bantu languages of the Niger-Congo language family), though the construction types vary, and these constructions can at least be used for macro-events whose co-event is a cause, particularly state change events whose co-event is a cause, realization events, and motion events whose co-event is a cause. The languages differ in how they can



extend their temporal sequence constructions to events whose co-event is not a cause, for example, motion events whose co-event is a manner. This applies to temporal sequence constructions, but not to other constructions including simultaneity constructions, whose constituent order depends largely on the basic word order of the language. What is noticeable is that the languages that we examined include not only Bantu languages (e.g. Bende: Abe 2016), which have the SVO word order, but also a language with a split and parallel system of satellite-framed, verb-framed, and other conflation patterns, Kupsapiny (Kawachi 2016b), as well as so-called equipollently-framed languages, Akan (Koga 2016) and Yoruba (Komori 2016). Thus, the typology of event integration can be viewed not only in terms of the figure-ground organization of language, specifically the use of the categories of grammatical constituents (adverbials vs. verbs, verbs vs. satellites) for a co-event and an association function, as Talmy discovered, but also in terms of the order in which these event components are expressed. These African languages exhibit a preference for iconicity (Haiman 1980, 1983) in the order of expressing event components, corresponding to the temporal order of their occurrence, unlike Romance and Germanic languages, for which the figure-ground organization of the categories of grammatical constituents serves as a stronger factor than iconicity in forming their characteristic event integration patterns.

Thus, the question that the present chapter addresses is whether Japanese consistently displays the verb-framed pattern across the five event domains, or prefers the order of a co-event and an association function reflecting iconicity in expressing events where these components can be interpreted as occurring in this order. As a comparison, the present study concentrates on Sidaama.

This section presents data on event integration patterns in Sidaama and Japanese in the five event domains. As stated above, the focus of the investigation is on whether or not the temporal sequence constructions in the two languages, which are used for at least events whose co-event is a cause, can accommodate other types of events. This section also examines how other constructions are used in the five event domains to see if there is any similarity between the two languages.

In Sidaama, the temporal sequence construction used for event integration is the converb construction. On the other hand, Japanese has two constructions that can be regarded as temporal sequence constructions, the converb or gerundive *-te* construction and the V-V compound verb construction. These constructions usually exhibit a verb-framed pattern, where the first and second verbs respectively express a co-event and an association function.

The Japanese *-te* gerundive verbs have two major functions: clausal conjunction (see Hasegawa 1996; Horie this volume) (core subordination, core coordination, and clausal juncture in RRG) and complex predicate formation (see Shibatani 2009; Nakatani 2016) (nuclear juncture and core cosubordination in RRG). In the former function, *-te* connects two or more verbal cores or clauses sequentially, where the conjuncts may or may not have the same subject, whereas in the latter, *V-te* forms a

complex predicate with a limited number of grammaticalized verbs. Because this chapter deals only with events expressed by a single clause with the same subject, as mentioned at the end of section 2, we exclude clausal conjunction with different subjects, and focus on multiple verbal core predicates with the same subject as well as complex predicates in the form of “V1-*te* + tensed V2”. In either use of the -*te* construction, the first verb (V1) represents an event that takes place prior to or simultaneously with the event designated by the second verb (V2) in temporal sequence.

The V-V compound construction in Japanese also has two sub-constructions, what Kageyama (1989, 2016) calls “lexical” compound verbs and “syntactic” compound verbs. According to him, they show different syntactic behavior – syntactic compounds allow passives, honorific verbs, verbal anaphora, light verb constructions, and idioms to occur in V1, whereas lexical compounds do not. Kageyama further shows that lexical compounds are of two subtypes, thematic compound verbs (those that are paraphrasable with the *-te* construction) and aspectual compound verbs (those that are not). The present study treats both compound verb constructions as temporal sequence constructions.

Data are presented below first for state change (Section 4.1), whose co-event is usually a cause, and realization (Section 4.2), whose co-event is always a cause, and then for motion (Section 4.3), temporal contouring (Section 4.4), and action correlation (Section 4.5).<sup>5</sup>

## 4.1 State change

In expressing state-change events as macro-events, both Sidaama and Japanese follow the verb-framed pattern, where the cause appears in a non-main verb or an adjunct and the transition shows up in the main verb.

Sidaama uses the *-e* construction for this type of event, as in (11a). It can also use an adjunct for a co-event of cause, as in (11b).

- (11) *šaám-u* *baʼ-ø-inó.*  
candle-NOM.M burn-3SG.M-CVB disappear-3SG.M-D.PRF.3  
(b) *bubbé-te-nni* *tʼo-ø-inó.*  
wind-GEN.F-ABL.INS go.out-3SG.M-D.PRF.3

- (a) 'The candle burned away.' (*lit.* 'The candle burned and disappeared.')  
(b) 'The candle blew out.' (*lit.* 'The candle went out by the wind.')

5 Japanese has *kango* (Sino-Japanese) verbal nouns written with two Chinese characters, which can be followed by the light verb for doing *suru*. However, the present study does not take them into consideration because they are not very characteristic in Talmy's (2000: 27) sense, according to which "characteristic" means "*colloquial* in style, rather than literary, stilted, and so on", "*frequent* in occurrence in speech, rather than only occasional", and "*pervasive*, rather than limited".

For spontaneous state-change events as macro-events, Japanese may use aspectual lexical compound verbs, as in (12a), as well as thematic lexical compound verbs (e.g. *moe-hirogat-ta* [burn-spread-PST]), or use the *-te* construction, as in (12b). An adjunct may also be used for the co-event of cause, as in (12c).

- (12)
- |                |           |           |           |  |
|----------------|-----------|-----------|-----------|--|
| <i>Roosoku</i> | <i>no</i> | <i>hi</i> | <i>ga</i> | $\left\{ \begin{array}{l} \text{(a) } \textit{moe-tuki-ta.} \\ \text{burn-become.exhausted-PST} \\ \text{(b) } \textit{moe-te} \quad \textit{nakunat-ta.} \\ \text{burn-GER disappear-PST} \\ \text{(c) } \textit{kaze de} \quad \quad \textit{kie-ta.} \\ \text{wind because.of go.out-PST} \end{array} \right\}$ |
| candle         | GEN       | fire      | NOM       |  |
|                |           |           |           |  |
|                |           |           |           |  |
- (a) 'The candle burned out.'  
 (b) 'The candle burned away.' (*lit.* 'The candle burned, and disappeared.')

(c) 'The candle blew out.' (*lit.* 'The candle went out because of the wind.')

For causative state-change events, Sidaama and Japanese use different sets of constructions depending on whether the causation is onset or extended causation, though both follow the verb-framed pattern.

In Sidaama, causative state-change events expressed with the *-e* construction are usually interpreted as onset causation events, as in (13a), whereas those expressed with the *-a-nni* construction are interpreted as extended causation events, as in (13b).

- (13)
- |            |                 |   |
|------------|-----------------|---|
| <i>ísi</i> | <i>uddanó</i>   | $\left\{ \begin{array}{l} \text{(a) } \textit{huunč' -ø -e} \\ \text{squeeze-3SG.M-CVB} \\ \text{(b) } \textit{huunč' -ø -á -nni} \\ \text{squeeze-3SG.M-INF-ABL.INS} \end{array} \right\}$ |
| 3SG.M.NOM  | clothes.ACC.OBL |   |
|            |                 |   |
|            |                 |   |
- moo-šš-ø-inó.*  
 become.dry-CAUS-3SG.M-D.PRF.3

(a) 'He squeezed the clothes (usually, one time), and then dried them.'

(b) 'He dried the clothes by squeezing them (multiple times at certain intervals).'

In Japanese, causative state-change events expressed with the *-te* construction may be interpreted either as onset or extended causation events, as in (14a), whereas those expressed with the *nagara* construction are interpreted as extended causation events, as in (14b).

- (14)
- |             |          |   |  |
|-------------|----------|---|--|
| <i>Huku</i> | <i>o</i> | $\left\{ \begin{array}{l} \text{(a) } \textit{sibot-te} \\ \text{squeeze-GER} \\ \text{(b) } \textit{sibori} \quad \textit{nagara} \\ \text{squeeze at.same.time} \end{array} \right\}$ | $\left\{ \begin{array}{l} \textit{kawak-asi-ta.} \\ \text{become.dry-CAUS-PST} \end{array} \right\}$ |
| clothes     | ACC      |   |  |
|             |          |   |  |
|             |          |   |  |

'I squeezed the clothes dry.'

(a) squeezed once or multiple times, (b) squeezed multiple times

For events where an action conducted as a means of causation (a type of cause) immediately leads to a state change, the thematic verb compound, which can be paraphrased with the *-te* construction, may be used, whether the causation may be onset or extended causation, as in (15).

- (15) *Doa o osi-ake-ta.*  
 door ACC push-open(tr)-PST  
 ‘I pushed the door open.’

## 4.2 Realization

In Sidaama, realization events are also expressed by the verb-framed pattern, especially the *-e* construction, whose main verb expresses the association function of the fulfillment of the agent’s goal or the confirmation of its implicature, and whose non-main verb expresses the co-event of cause, as in (16).

- (16) *isi moorančo ugaat’-ø-e amad-ø-inó.*  
 3SG.M.NOM thief.ACC.OBL hunt-3SG.M-CVB catch-3SG.M-D.PRF.3  
 ‘He hunted the thief down.’ (*lit.* ‘He hunted for and caught the thief.’)

Japanese also follows the verb-framed pattern in expressing realization events. It usually uses the verb compound construction or the *-te* construction, whose main verb expresses the association function of the fulfillment of the agent’s goal or the confirmation of its implicature, and whose non-main verb expresses the co-event of cause. For example, in (17a) and (17b), the agent’s action of hunting, which does not imply the fulfillment of the goal, appears as the non-main verb, and the fulfillment of his intention to find the thief and his intention to catch the thief is expressed in the main verb.

- (17) *Doroboo o*  $\left\{ \begin{array}{l} \text{(a) } \textit{sagasi-ate-ta.} \\ \text{thief ACC} \quad \text{hunt.for-hit-PST} \\ \text{(b) } \textit{sagasi-te tukamae-ta.} \\ \text{hunt.for-GER catch-PST} \end{array} \right\}$

- (a) ‘He found the thief (after hunting for him/her).’ (*lit.* ‘He hunted for and hit/spotted the thief.’)  
 (b) ‘He hunted the thief down.’ (*lit.* ‘He hunted for and caught the thief.’)

When the verb compound is used for realization, the compound may be a syntactic compound, as in (17a) (another example: *shirabe-tukusu* [check-do.exhaustively] ‘do research exhaustively’), or an aspectual lexical compound (e.g. *kaki-ageru* [write-complete (*lit.* raise)] ‘complete writing’), *nomi-hosu* [drink-complete (*lit.* cause.to.dry/empty)] ‘drink up’).

### 4.3 Motion

Sidaama and Japanese both usually use their multi-verb constructions for motion events as macro-events, following the verb-framed pattern, where a path of motion and a co-event show up in the main verb and the non-main verb, respectively. Which of the constructions the languages use depends on the type of co-event.

#### (i) Manner as a co-event

For motion events whose co-event is a manner of motion, either language may use an adverbial for the manner and the main verb for the path of motion. Sidaama can also use the *-e* construction and the *-a-nni* construction (not in the sense of ‘while’), as in (18). These constructions are interchangeable with each other with almost no difference in meaning in many cases, when the co-event is a manner of motion, though the continuation of the occurrence of the co-event seems to be more emphasized with the *-a-nni* construction than with the *-e* construction, and the *-a-nni* construction seems to be more commonly used for such motion events than the *-e* construction.

- (18) *kaáse*            *min-í*            *giddo-ra*  
       ball(NOM.F) house-GEN.M inside-ALL
- |  |   |  |
|--|---|--|
| $\left\{ \begin{array}{l} \text{(a) } gongo'm-i-t-e \\ \text{roll-EP-3SG.F-CVB} \\ \text{(b) } gongo'm-i-t-á-nni \\ \text{roll-EP-3SG.F-INF-ABL.INS} \end{array} \right\}$ | } | $\left\{ \begin{array}{l} e'-'-inó. \\ \text{enter-3SG.F-D.PRF.3} \end{array} \right.$ |
|--|---|--|
- (a) ‘The ball rolled into the house.’ (*lit.* ‘The ball rolled and entered the house.’)  
 (b) ‘The ball rolled into the house.’ (*lit.* ‘The ball entered the house, rolling.’)

Japanese can use the thematic lexical verb compound, the *-te* construction, and the *nagara* constructions for motion events whose co-event is a manner of motion, as exemplified by (19a), (19b), and (19c), respectively.<sup>6</sup>

<sup>6</sup> Japanese also uses onomatopoeic words and manner mimetic words, which function as adverbials. When they are used, the construction shows the verb-framed pattern. They are not discussed here for the following reasons. First, onomatopoeic words are or could be accompanied by *to (iu) oto o tate-te/tate nagara* ‘with the sound ...’, and it is not clear whether they express a manner or concomitance of motion. Second, manner mimetic words usually modify manner of motion verbs, rather than path verbs, and seem to express a specific type of manner, rather than a manner of translational motion.

- (19) *Booru ga ie no naka ni*  
 ball NOM house GEN inside ALL

- |   |  |
|---|--|
| { | (a) <i>korogari-kon-da.</i><br>roll-enter-PST                      |
|   | (b) <i>korogat-te hait-ta.</i><br>roll-GER enter-PST               |
|   | (c) <i>korogari nagara hait-ta.</i><br>roll at.same.time enter-PST |

(a) 'The ball rolled into the house.'

(b) 'The ball rolled into the house.' (*lit.* 'The ball rolled and entered the house.')

(c) 'The ball rolled into the house.' (*lit.* 'The ball entered the house, rolling.')

Some manners of motion (e.g. 'jump') may be interpreted as occurring only once or more than once depending on the construction in either language (Kawachi 2007).

(ii) Concomitance as a co-event

Both Sidaama and Japanese use different constructions depending on whether the concomitance is expressed by an action verb or a state-change verb. When the concomitance is expressed by an action verb, Sidaama uses the *-a-nni* construction for the continuation of the concomitance, as in (20), but not the *-e* construction, and Japanese usually uses the *nagara* construction, as in (21a), for the continuation of the action as the concomitance of the motion, but could also use the *-te* construction to represent this meaning, as in (21b), although this construction is usually used for one-time occurrence of the action.

- (20) *íse hékk'i hékk'i y-i-t-á-nni ané*  
 3SG.F.NOM hekk'i hekk'i say-EP-3SG.F-INF-nni 1SG.GEN  
*wido-ó-nni sa-'-inó.*  
 side-LV-LOC pass-3SG.F-D.PRF.3  
 'She passed by me, hiccupping.'

- (21)
- |  |   |   |   |
|--|---|---|---|
| <i>Kanozyo ga syakkuri o</i><br>3SG.F NOM hiccupping ACC | { | (a) <i>si nagara</i><br>do at.same.time<br>(b) <i>si-te</i><br>do-GER | } |
|--|---|---|---|

*watasi no soba o toot-ta.*  
 1SG GEN nearness ACC pass-PST

(a) 'She passed by me, hiccupping.'

(b) 'She passed by me, hiccupping.' or 'She hiccupped (once), and passed by me.'

When the concomitance is expressed by a state change verb, Sidaama and Japanese use the *-te* construction (22) and the *-e* construction (23), respectively.

- (22) *íse hatté uddano uddid-d-e*  
 3SG.F.NOM that.F.ACC.OBL clothes put.on-3SG.F-CVB  
*ĩilá mar-t-inó.*  
 feast.ACC.OBL go-3SG.F-D.PRF.3  
 ‘She wore those clothes to the feast.’

- (23) *Enkai ni sono huku o ki-te it-ta.*  
 feast ALL that clothes ACC put.on-GER go-PST  
 ‘I wore those clothes to the feast.’ (*lit.* ‘I wore those clothes to the feast.’)

(iii) Means of causation as a co-event

For motion events whose co-event is a means of causation (a cause in Talmy’s framework), Sidaama commonly uses the *-e* construction if the causation is onset causation, as in (24a), and the *-a-nni* construction if the causation is extended causation, as in (24b).

- (24) *kaasé*  $\left\{ \begin{array}{l} \text{(a) } \textit{gan-}\emptyset\textit{-e} \\ \text{hit-1SG-CVB} \\ \text{(b) } \textit{gan-}\emptyset\textit{-á-nni} \\ \text{hit-1SG-INF-ABL.INS} \end{array} \right\}$  *gooleé*  
 ball.ACC.OBL  $\left\{ \begin{array}{l} \text{hit-1SG-CVB} \\ \text{hit-1SG-INF-ABL.INS} \end{array} \right\}$  goal.ACC.OBL

*ee-ss-oó-mm-o.*

enter-CAUS-D.PRF.1-1SG-M

- (a) ‘I (M) kicked the ball into the goal.’ (kicked once)  
 (b) ‘I (M) put the ball in the goal by kicking it (multiple times).’

For motion events whose co-event is a means of causation, Japanese can use the thematic lexical compound verbs, as in (25a). Such events may also be expressed by the *-te* construction or the *nagara* construction, though in a less fused way. The *-te* construction as in (25b) is neutral to the distinction between onset and extended causation, and the *nagara* construction as in (25c) is limited to extended causation, where the action of kicking is repetitive.

- (25) *Booru o gooru ni*  $\left\{ \begin{array}{l} \text{(a) } \textit{keri-} \\ \text{kick-} \\ \text{(b) } \textit{ket-te} \\ \text{kick-GER} \\ \text{(c) } \textit{keri nagara} \\ \text{kick at.same.time} \end{array} \right\}$  *ire-ta.*  
 ball ACC goal ALL  $\left\{ \begin{array}{l} \text{kick-} \\ \text{kick-GER} \\ \text{kick at.same.time} \end{array} \right\}$  put.in-PST

- (a) 'I kicked the ball into the goal.' (kicked once)
- (b) 'I kicked the ball into the goal.' (*lit.* 'I kicked the ball, and put it in the goal.')  
(kicked normally once, possibly multiple times)
- (c) 'I put the ball in the goal, kicking it (multiple times).'

Thus, in both Japanese and Sidaama, throwing cannot be a means of extended causation (*\*ol-ø-a-nni* / *\*nage nagara ire-ta*), though it can be a means of onset causation (*ol-ø-e* / *nage-ire-ta*, *nage-te ire-ta* interpreted only as onset causation).

#### 4.4 Temporal contouring

The present study examines how Sidaama and Japanese express aspectual categories of completion/termination, initiation, continuation, habitualness, repetition, gradualness, and frequency.

##### (i) Completion/termination

Sidaama has three verbs for completion/termination that are used as the main verb of the *-e* construction; the transitive verbs, *gud-* 'finish (doing a bounded action)' and *ka'-* 'finish (doing an unbounded action)', and the intransitive verb, *goof-* 'come to an end (often, after consumption)'. Sidaama also has a verb of (usually, permanent) termination, *agur-* 'stop doing', which takes the infinitive form of a verb.

Japanese has a pair of intransitive and transitive verbs for completion, *owaru* [finish (intransitive)] and *oeru* [finish (transitive)], which are used as the main verb of the aspectual verb compound (e.g. *tabe-owaru* [eat-finish (intransitive)], *tabe-oeru* [eat-finish (transitive)]). It also has a verb of termination, *yameru* [stop], which takes a nominalized verb as object (e.g. *taberu no o yameru* [eat NMLZ ACC stop]).

As mentioned at the end of section 4.3, Japanese has aspectual verb compounds whose main verbs express the fulfillment of the agent's goal or the confirmation of its implicature. The main verb of such a compound could be regarded as a verb for completion.

##### (ii) Initiation

Sidaama has two verbs of initiation, *hanaf-* 'start to do' and *jammar-* 'start to do (borrowed from Amharic)', which take the infinitive form of a verb. It also has constructions that are used for the initiation sense of 'be about to do'; *V-a-PERS.NUM(.GENDER)-ra* or *V-PERS.NUM(.GENDER)-a-ra* (*-a*: infinitive suffix, *-ra*: dative suffix) is followed by the verb *ka'-*, which is also used for completion or termination, as mentioned above, in one of these constructions, or the noun-phrase clitic *=ti* in the other construction, to express 'be about to do'. However, none of these can be classified into either of Talmy's typological types.



Japanese has three verbs of initiation that used as the main verb of a syntactic verb compound, *hazimeru* ‘begin’ (e.g. *hanasi-hazimeru* [talk-begin]), *dasu* ‘start’ (lit. take out), (e.g. *hanasi-dasu* [talk-start]), and *kakeru* ‘be about to’ (e.g. *hanasi-kakeru* [talk-be.about.to]).

### (iii) Continuation

Sidaama can express a person’s determined continuation of his/her action with the negation of the verb for termination *agur-* ‘stop doing’, which takes the infinitive form of a verb for the continued action. However, it is not clear whether this construction can be categorized into either of Talmy’s typological patterns.

Japanese has a verb for continuation, *tuzukeru* ‘continue’, which is used as the main verb of a syntactic compound verb, as in *hasiri-tuzukeru* [run-continue].

Both languages have aspectual constructions that express continuation. Sidaama has a continuous aspect construction (‘have been doing something/in a state’) and a progressive aspect construction (with an action verb: ‘be doing something’), both of which use the existential/locational verb as the main verb of the *-e* construction and the *-a-nni* construction (manner/concomitance), and use verb forms with *-e* and with *-nni* for a continued action or state change and for an ongoing action or state change, respectively. Japanese also has a progressive construction with *-te iru* [GER exist]. In any of the constructions, it is the construction as a whole that expresses continuation.

### (iv) Gradualness

Both Sidaama and Japanese may or may not follow the verb-framed pattern in expressing gradualness. Sidaama may express gradualness with an adverbial that is in the form of the non-main verb of the *-e* construction (*sununni* (*sununni*) *y-/ass-/ikk*-PERS.NUM.(GENDER)-*e* [slowly (slowly) say-/do-/become-PERS.NUM.(GENDER)-CVB] ‘gradually’, *šiima šiima ass*-PERS.NUM.(GENDER)-*e* [small small do-PERS.NUM.(GENDER)-CVB] ‘gradually’) or an oblique NP adverbial (e.g. *yanna yanna-te-nni* [time time-GEN.F.ABL.INS] ‘gradually’, *bero-nni teččo* [yesterday-ABL.INS today] ‘gradually’, *aana aana-ho* [top top-DAT.LOC.M] ‘one after another’ (for a state change of a group of objects)). Sidaama may also express a gradual state change (‘be in the process of entering a state’) with the progressive aspect construction mentioned in (iii), when its non-main verb is a state change verb. It can also use the simultaneity construction (e.g. (21)) for a gradual state change, whose main verb is the verb for coming (*da-*) or one of the verbs for going (*had-*) and non-main verb (V1) is a state-change verb, though such a use of this construction seems to be slightly archaic.

- (26) *ise busul-t-a-nni*  
 3SG.F.NOM become.smart-3SG.F-INF-ABL.INS  
*dag-g-ino/had-d-ino.*  
 come-3SG.F-D.PRF.3/go-3SG.F-D.PRF.3  
 ‘She became smart.’ (lit. ‘She came/went while becoming smart.’)

Japanese also has adverbials for the gradualness of a state change: *dan-dan (to)* [step-step (QUOT)] ‘gradually’, *zyozyo ni* [gradualness LOC] ‘gradually’, *sukosi zutu* [a.little by] ‘little by little’. Japanese can also use the verb of coming *kuru* or going *iku* as the main verb of the *-te* construction whose non-main verb is a state-change verb to express a gradual state change (e.g. *kura-ku nat-te kuru* [dark-ADVL become-GER come], *kura-ku nat-te iku* [dark-ADVL become-GER go]). This can be regarded as an instance of the verb-framed pattern.

#### (v) Repetition

Sidaama can express repetition with the verb *hig-* ‘return’ or *k’ol-* ‘turn, return’ used as the non-main verb of the temporal sequence construction (*hig*-PERS.NUM(.GENDER)-*e* or *k’ol*-PERS.NUM(.GENDER)-*e* ‘again’), with its reduplication (*hig*-PERS.NUM(.GENDER)-*e hig*-PERS.NUM(.GENDER)-*e* or *k’ol*-PERS.NUM(.GENDER)-*e k’ol*-PERS.NUM(.GENDER)-*e* ‘again and again’), or with the reduplicated form of the verb *rak-* ‘hurry’ used as the non-main verbs of the temporal sequence construction (*rak*-PERS.NUM(.GENDER)-*e rak*-PERS.NUM(.GENDER)-*e* ‘again and again’). There is also an idiomatic adverbial for ‘one after another’: *aana aana-ho* [top top-DAT. LOC.M]. In any of these cases, the repeated action, that is, the co-event of repetition, appears as the main verb.

Sidaama might also express the repetition of an action by means of the reduplication of a verb (e.g. *šaf-* ‘shake’/šāššaf- ‘shake repeatedly’, *gan-* ‘hit’/gangan- ‘beat’). In this case, the repeated action is expressed by the verb root, while the repetition is indicated by the construction as a whole.

Japanese has a verb of repetition, *kurikaesu* ‘repeat’, but uses it not as the main verb of either the verb compound construction or the *-te* construction, but as the non-main verb of either construction (e.g. *kurikaesi-hanasu* [repeat-talk], *kurikaesi-te iu* [repeat-GER say]; also a reduplicated variant: e.g. *kurikaesi-kurikaesi-hanasu* [repeat-repeat-talk]), though it could use it as a transitive verb taking object (e.g. *hanasi o kurikaesu* [talk ACC repeat]).

#### (vi) Habitualness

Neither Sidaama nor Japanese follows the verb-framed pattern in expressing such notions pertaining to habitualness as ‘always’ and ‘every day/evening/year’, for which both languages use adverbials (e.g. Sidaama: *wo’má=nka woité* [all=EMPH time], Japanese: *itumo* for ‘always’; Sidaama: *barr-ú barr-ú-nni* [day-GEN.M day-GEN.M-ABL.INS]/*duuččá(=nka) barra* [many(=EMPH) day]/*barrá duuččá* [day many], Japanese: *mainiti* for ‘every day’).

#### (vii) Frequency

Sidaama and Japanese, which lack a verb of frequency, both use adverbials (or a non-main verb) rather than a verb for frequency notions such as ‘often’, ‘sometimes’,

and ‘never’ (e.g. Sidaama: *sa’-ø-e sa’-ø-e* [pass-1SG/3SG.M-CNV pass-1SG/3SG.M-CNV] for the first-person singular or the third-person singular masculine/*yanná yanná* [time time], Japanese: *toki-doki* [time-time] for ‘sometimes’).

## 4.5 Action correlation

There are five action correlation categories. However, neither Japanese nor Sidaama follows the verb-framed pattern in expressing (i) concert, (ii) accompaniment, (iii) imitation, or (iv) surpassment, though Sidaama may follow the verb-framed pattern in expressing (iv) surpassment in the context of a certain type of event. Both languages have a few verbs for (v) demonstration, but only one of the Japanese verbs clearly shows the verb-framed pattern.

### (i) Concert

In an event of concert, two event participants are both engaged in a joint activity, each making a contribution of equal importance to the whole.

For the association function of this notion, Sidaama uses an adjunct constituent, which is an oblique noun phrase as in (27), a case-marked noun phrase as in (28a), or an idiomatic expression serving as the non-main verb of the *-e* construction as in (28b).

- (27) 
$$\begin{array}{l} \textit{íse} \\ 3\text{SG.F.NOM} \end{array} \left\{ \begin{array}{ll} \text{(a) } \textit{ísí} & \textit{ledo} \\ & 3\text{SG.M.GEN COM} \\ \text{(b) } \textit{ledó-si} & \\ & \text{COM-3SG.M.POSS} \end{array} \right\} \begin{array}{l} \textit{sirb-i-t-inó.} \\ \text{sing-EP-3SG.F-D.PRF.3} \end{array}$$

‘She sang with him.’

- (28) 
$$\begin{array}{ll} \textit{íse=nná} & \textit{ísi} \\ 3\text{SG.F.NOM=and} & 3\text{SG.M.NOM} \end{array} \left\{ \begin{array}{ll} \text{(a) } \textit{mitte-é-nni} & \\ & \text{one.F-LV-ABL.INS} \\ \text{(b) } \textit{ikk-i-t-e} & \\ & \text{become-EP-3PL-CVB} \end{array} \right\}$$

$$\begin{array}{ll} \textit{dikkó} & \textit{haď-d-inó.} \\ \text{market.ACC.OBL} & \text{go-3SG.F-D.PRF.3} \end{array}$$

‘She and he went to the market together.’

For this type of association function, Japanese uses an adjunct *issyo ni* ‘together’, optionally accompanied by the converb of *naru* ‘become’, as in (29) and (30).

- (29) *Kanozyo ga kare to issyo ni (nat-te) utat-ta.*  
3SG.F NOM 3SG.M COM togetherness COP become-GER sing-PST  
‘She sang with him.’

- (30) *Kanozyo to kare ga issyo ni itiba ni it-ta.*  
 3SG.F and 3SG.M NOM togetherness COP market ALL go-PST  
 ‘She and he went to the market together.’

(ii) Accompaniment

In an event of accompaniment, one participant’s action is secondary or additional to another participant’s action.<sup>7</sup>

Sidaama does not seem to have an expression specifically used for accompaniment. It may casually employ the construction with *ledo* used for concert, as in (27).

Japanese may also use the verb compound *tuki-sou* [attach-move.along] ‘accompany, attend on’ as the non-main verb of the *-te* construction (e.g. *tuki-sot-te hashiru* [attach-move.along-GER run]) or the *nagara* construction (e.g. *tuki-soi nagara hashiru* [attach-move.along at.same.time run]) for an accompaniment event.

(iii) Imitation

Sidaama does not have a verb specifically designating ‘imitate’ but uses the verb *ikk-* ‘become’ as the converb of the *-e* construction. This verb can express one entity’s equality or similarity with another (e.g. *isi isé ikk-ø-inó*. [3SG.M.NOM 3SG.F.ACC.OBL become-3SG.M-D.PRF.3] ‘He became equal/similar to her (with respect to e.g. height, behavior, appearance, wealth, etc.).’). It can also be used as the non-main verb of the *-e* construction to literally mean ‘X becomes Y, and V2’ to express an imitation event, as in (31).

- (31) *isi isé ikk-ø-e sirb-ø-inó.*  
 3SG.M.NOM 3SG.F.ACC.OBL become-3SG.M-CVB sing-3SG.M-D.PRF.3  
 ‘He sang in the imitation of her.’ (*lit.* ‘He became her, and sang.’)

The Japanese expression for ‘imitate’, *mane o suru* [imitation ACC do], can be used as the non-main verb of the *-te* construction or the *nagara* construction, as in (32).

- (32) *Kare ga kanozyo no mane o*  $\left\{ \begin{array}{l} \text{(a) } si-te \\ \text{do-GER} \\ \text{(b) } si \quad nagara \\ \text{do at.same.time} \end{array} \right\}$   
 3SG.M NOM 3SG.F GEN imitation ACC  
*utat-ta.*  
 sing-PST  
 ‘He sang in imitation of her.’

<sup>7</sup> The simultaneity constructions used for two separate events (the *-a=nná* construction in Sidaama and the *aida ni* construction in Japanese), whose main clause expresses the secondary action and whose subordinate clause expresses the primary action (e.g. ‘While she ran, he also ran.’), might express accompaniment, as long as the events are in an accompaniment relation. Nevertheless, they do not necessarily. Moreover, these constructions contain two clauses in the first place. Thus, the present study does not regard them as constructions for macro-events of accompaniment.

Japanese also has the construction, [[[REL.CL] *mane*] *o suru*] [REL.CL imitation ACC do], where the relative clause for the imitated action modifies the noun for imitation *mane* in *mane o suru* (e.g. *kanozyo ga utau mane o suru* [3SG.F NOM sing imitation ACC do]). However, this is not an instance of the verb-framed pattern, because the clause for the co-event modifies the object noun phrase of the matrix clause, which expresses the association function.

(iv) Surpassment

Sidaama usually expresses the notion of surpassment with an adverbial or with a non-main verb of the *-e* construction, and a co-event in which one surpasses another with a main verb, as in (33).

- (33) 
$$\left. \begin{array}{l} \text{íse} \\ \text{3SG.F.NOM} \end{array} \right\} \begin{array}{l} \text{(a) } \text{insá} \quad \text{ale-é(-nni)} \quad (\text{ass-i-t-e}) \\ \quad \quad \text{3PL.GEN aboveness-LV(-LOC)} \quad (\text{do-EP-3SG.F-CVB}) \\ \text{(b) } \text{insá-nni} \quad \text{roor-s-i-t-e} \\ \quad \quad \text{3PL.GEN-ABL.INS} \quad \text{exceed-CAUS-EP-3SG.F-CVB} \end{array} \right\}$$
- sagalé*                      *k'iš-š-annó.*  
 food.ACC.OBL    cook-3SG.F-IPFV.3  
 'She cooks better than them.'  
 (lit. (a) 'She (does) above them (and) cooks food.'/(b) 'She exceeds them and cooks food.')

Sidaama can also follow the verb-framed language pattern when it uses the *-e* construction whose main verb expresses the notion of surpassment and whose non-main verb expresses a co-event, as in (34). However, this is limited to a racing context.

- (34) *íse*                      *isó*                      *daak-k-e*                      *k'olč-i-t-annó.*  
 3SG.F.NOM    3SG.M.ACC.OBL    swim-3SG.F-CVB    outdistance-EP-3SG.F-IPFV.3  
 'She swims faster than him.' (lit. 'She swims and outdistances him.')

Japanese has a comparative construction that is made up of a noun phrase for the standard of comparison, the comparative particle *yorimo*, a manner adverbial, and a verb, as shown in (35).

- (35) *Kanozyo wa karera yorimo uma-ku ryoori o suru.*  
 3SG.F    TOP    3PL    than    good-ADVL    cooking    ACC    do  
 'She cooks better than them.'

The verbs *katu* 'win', *makasu* 'defeat', and *makeru* 'become defeated' may each serve as the main verb of a thematic verb compound in the context of a sport game or

match, the non-main verb expresses a reason of winning or losing a game or match, rather than in what activity one defeats or gets defeated by another, and thus this is not an instance of a surpassment event (e.g. *nage-katu* [throw-win] ‘win as a result of good pitching’, *mamori-katu* [defend-win] ‘win as a result of good defense’, *uti-makasu* [hit-defeat] ‘win as a result of many hits’, *nebari-katu* [adhere-win] ‘win as a result of not giving up’).

(v) Demonstration

Sidaama has two verbs for demonstration, *ros-i-s-* [learn-EP-CAUS-] ‘teach, show (for the purpose of teaching)’ and *leell-i-š-* [become.visible-EP-CAUS-] ‘show, demonstrate’, which are used with a clause for ‘how to do’ as direct object, but these verbs are used in neither multi-verb construction in section 1.

Japanese can use *miseru* ‘show’ as the main verb of the *-te* construction (36).

- (36) *Karera ni utat-te mise-ta.*  
 3PL DAT sing-GER show-PST  
 ‘I showed them how to sing.’

Other verbs of demonstration, *simesu* ‘demonstrate, show’ and *osieru* ‘teach’, take a noun phrase for ‘how to do’ as object (e.g. *utai kata o* [sing way ACC]), but are usually not used in any of the multi-verb constructions.

## 5 Analysis and discussion

The findings in the preceding section are summarized in Table 3, where “OK” indicates that the association function (the core-schematic component of a framing event) in question can be expressed with the construction, “(OK)” means that the construction can express the association function in a limited way, and “\*” (asterisk) means that it cannot. The constructions indicated with “adverb or non-main verb” are those where an adverb or a non-main verb expresses the association function, and are not verb-framed constructions, unlike the other constructions in this table, though they are not satellite-framed constructions because of their lack of any satellite.

Table 3 makes clear the similarities and differences between Sidaama and Japanese in the patterns of expressing specific types of macro-events in the five event domains. The two languages exhibit the following similarities. First, for those event types for which Sidaama uses the *-e* construction, Japanese uses the *-te* construction, the verb compound, or either of these. In fact, Sidaama and Japanese characteristically employ these constructions for most of the types of events in Table 3 in which they follow the verb-framed pattern. In most of such events, the co-event precedes the

**Table 3:** Patterns of expressing events in the five event domains

Association function (the core-schematic component of a framing event) expressed in		Sidaama				Japanese					
		the main verb of				the main verb of					
		CVB: -e	SIMUL: -a-nni	construction with adverbial	adverb or non-main verb	CVB: -te	VV (thematic)	VV (aspectual)	VV (syntactic)	SIMUL: <i>nagara</i>	construction with adverbial adverb or non-main verb
State change											
	spontaneous	OK	*	OK	*	OK	OK	OK	*	*	OK *
	causative (onset)	OK	*	*	*	OK	OK	*	*	*	*
	causative (extended)	*	OK	*	*	OK	OK	*	*	OK	*
Realization		OK	*	*	*	OK	*	OK	OK	*	*
Motion											
	with manner	OK	OK	OK	*	OK	OK	*	*	OK	OK *
	with concomitance (action)	*	OK	*	*	OK	*	*	*	OK	*
	with concomitance (state change)	OK	*	*	*	OK	*	*	*	*	*
	with means of causation (onset)	OK	*	*	*	OK	OK	*	*	*	*
	with means of causation (extended)	*	OK	*	*	OK	*	*	*	OK	*
Temporal contouring											
	Completion/termination	OK	*	*	*	*	*	OK	*	*	*
	Initiation	*	*	*	*	*	*	*	OK	*	*
	Continuation	*	*	*	*	OK	*	OK	*	*	*
	Gradualness	*	(OK)	*	OK	OK	*	*	*	*	OK
	Repetition	*	*	*	OK	*	*	*	*	*	OK
	Habitualness	*	*	*	OK	*	*	*	*	*	OK
	Frequency	*	*	*	OK	*	*	*	*	*	OK
Action correlation											
	Concert	*	*	*	OK	*	*	*	*	*	OK
	Accompaniment	*	*	*	(OK)	*	*	*	*	*	OK
	Imitation	*	*	*	OK	*	*	*	*	*	OK
	Surpassment	(OK)	*	*	OK	*	(OK)	*	*	*	OK
	Demonstration	*	*	*	*	OK	*	*	*	*	*

association function, or at least could be interpreted as logically preceding it. In a state-change event whose co-event is a cause, the cause always precedes the transition, and this also applies to realization events, which could be regarded as a special type of state-change event. In motion events with a manner, a concomitance, or a cause, the co-event is or could be interpreted as occurring before (at least before

the completion of) the association function of translational motion. Also, in the temporal contouring category of completion, the co-event can be analyzed as occurring before the association function.<sup>8</sup>

Second, for the event types for which Sidaama uses the *-a-nni* construction, Japanese can use the *nagara* construction, and vice versa, except that the Sidaama *-a-nni* construction may use a deictic verb as its main verb to express gradual state change events, unlike the Japanese *nagara* construction. Because non-main verbs of these constructions express a repeated or continued action or change at the same time as or during the event of the main verb, these constructions are used for events whose co-event action or change is normally repeated or continuous, namely, motion events with a manner of motion or with a concomitance action and extended causation events. They are not used for temporal contouring or action correlation, because their co-events do not necessarily have this property. Note, however, that even though this property is observed in the case of continuation and repetition, the association function manifests itself in the main verb of other constructions in both languages.

Third, for event types whose association function Sidaama expresses with an adverb or a non-main verb of the converb construction, Japanese also uses a similar grammatical category. Thus, the two languages exhibit a non-verb-framed pattern in expressing most types of temporal contouring and action correlation events, which do not show either of the temporal properties mentioned above.

Fourth, for those motion events whose co-event is a manner, both Sidaama and Japanese can use either the converb or the simultaneity construction (also compound verbs in the case of Japanese). This seems to be because such events can be analyzed as having either the temporal order of the co-event and the association function or the simultaneity or temporal overlap of these event components.

On the other hand, differences between the two languages also exist. First, there are a few types of events for which Sidaama uses the *-a-nni* construction, not the *-e* construction, but Japanese can use not only the *nagara* construction, but also the *-te* construction. Also for extended causation events, Sidaama uses the *-a-nni* construction, and Japanese usually uses the *nagara* construction, but causation events that the Japanese *-te* construction expresses may be interpreted as extended ones, though they are more commonly interpreted as onset ones. For motion events with a concomitance expressed by an action verb, Sidaama uses the *-a-nni* construction, and Japanese normally uses the *nagara* construction, but it may also use *-te* construction. Nevertheless, these could be regarded as instances of ‘shift’ (Talmy 1977, 2000) or ‘coercion’ (Pustejovsky 1993) – the *-te* construction normally cannot be used for extended causation or for a continued action as a concomitance of motion, but

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<sup>8</sup> This also seems to apply to termination and continuation, but only Japanese, but not Sidaama, can use its temporal sequence constructions.



can allow such an interpretation if an onset causation or one-time action interpretation is more likely in a particular context.

Second, there are a few types of events for which Japanese shows a clear verb-framed pattern, but Sidaama does not. Unlike Sidaama, Japanese can use a verb compound for initiation and continuation events, and the *-te* construction for demonstration events.

Despite these differences, unlike those European languages that consistently follow Talmy's typological patterns, which are patterns of expressing event components in terms of the figure-ground organization of language, Sidaama and Japanese both seem to prefer the order of 'a co-event followed by an association function (the core-schematic component of a framing event)' in expressing events whose co-event and association function occur or can be interpreted as occurring in this order. Thus, the preference for this order reflecting iconicity could be another parameter along which languages can differ in their event integration patterns. It seems that the iconicity principle is likely to be followed in some event domains and subdomains than in others, and that languages differ as to whether they place a higher priority on this principle or the figure-ground organization of language when expressing events in such domains and subdomains.

## 6 Conclusion

This chapter has shown that Sidaama and Japanese exhibit similarities in event integration patterns in the five event domains. In particular, while the verb-framed pattern is consistently observed in the event domains of motion, state change, and realization in both languages, patterns that deviate from it are found in expressions of many types of temporal contouring and action correlation events. A plausible reason for this disparity will be that the 'problematic' cases are not necessarily analyzed as having the temporal order of 'a co-event followed by an association function (the core-schematic component of a framing event)', which the converb constructions characteristically represent. Another reason will be that the co-events of the types of events in question are not necessarily repeated or continuous actions or state changes, for which the simultaneity constructions are to be used.

## Additional abbreviations

ABL.INS – ablative-instrumental (also, manner); ACC.OBL – accusative-oblique;  
 DAT.LOC – dative-locative; D.PRF – distant perfect; EP – epenthesis; F – feminine;  
 IPFV – imperfective; LV – lengthened vowel; M – masculine; NUM – number;  
 PERS – person; REL.CL – relative clause

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## **II Nominal constructions and related issues**



Masayoshi Shibatani

## 12 Nominalization in crosslinguistic perspective

### 1 Introduction

Shibatani (2017) in the syntax volume of this handbook series offers a bold new analysis of Japanese nominalization that distinguishes between lexical and grammatical nominalizations on the one hand, and between verbal-based and nominal-based nominalizations on the other. While each step of the proposed analysis is justified by language-internal evidence and theoretical considerations, the paper, due to space limitations, does not contain a full discussion of supporting evidence that can be garnered from crosslinguistic investigations into the phenomenon of nominalization. The discussions below complement those of the earlier paper by presenting crosslinguistic evidence in an effort to make an even stronger case for the proposed new analysis of nominalization.

This chapter is organized as follows. First, after a brief introduction to Shibatani's theory of nominalization, morphological evidence showing close affinity between lexical nominalization and grammatical nominalization is presented (section 2). Section 3 examines verbal-based grammatical nominalizations and their usage patterns with a focus on NP-use and modification-use, revealing the nature of so-called relative clauses. Various types of relative clauses, such as internally-headed relative clauses, headless relative clauses, and restrictive relative clauses all turn out to be merely uses of nominalizations and have no reality as independent structures. Section 4 offers functional definitions for clauses, sentences, and nominalizations and then shows that relative **clauses** are neither clauses nor sentences, contrary to the widely held belief in the field. There is clear evidence such as plural morphology and classifier marking that shows grammatical nominalizations under modification-use qua relative clauses are different from clauses and sentences that do not share the denotation function of nouns and nominalizations. Section 5 takes up a bold new analysis of genitive/possessive constructions in terms of nominal-based grammatical nominalizations. In Japanese, morphological evidence for the analysis of N-based nominalizations is somewhat indirect in that only NP-use of V-based and N-based nominalizations shares identical morphological marking. In other languages, however, the basic structures of both N-based and V-based nominalizations themselves are morphologically marked identically in both NP-use and modification-use, supporting Shibatani's claim that so-called genitive case or possessive forms (e.g. *boku no* 'my/mine' in Japanese, *my/mine*, *John's* in English) are N-based nominalizations whose modification-use underlies so-called possessive constructions (*boku no hon* 'my book', *my book*, *John's book*). Section 6 summarizes the

discussions and concludes the paper by looking at the form-function correlations in different types of nominalizations across languages (section 6.1) and by elaborating on the implications of the present study, in particular on how it reveals the theoretical and descriptive issues inherent in Keenan and Comrie's (1977) analysis of relative clauses (section 6.2). Before turning to these discussions, a brief introduction to Shibatani's theory of nominalization is provided for the benefit of those who do not have access to Shibatani (2017) and his other writings, e.g. Shibatani (2009), on this topic.

Shibatani defines nominalization as a **metonymic process** that yields constructions, including sublexical formatives, words, and phrasal units, associated with a denotation comprised of substantive or entity concepts that are metonymically evoked by the nominalization structures, such as events, facts, propositions, event protagonists, and resultant products or other concepts closely associated with the base forms. As products, nominalizations are like nouns by virtue of their association with an entity-concept denotation, a property that provides a basis for the referential function of a noun phrase headed by these nominals.<sup>1</sup> Verbs and verb phrases, on the other hand, are associated with **relational** concepts (time-stable or transient properties **pertaining to an entity**) and play a predication function in a clause by ascribing a relational concept to the referent of a subject noun phrase. They differ crucially from nouns and nominalizations in not denoting things and thing-like concepts and thereby in being unable to play a referential function.

Metonymic expressions may denote a variety of entity concepts that are closely associated with the concepts denoted by the original words or larger structures, and it is the speech context that determines and selects the denotation most relevant to the context in accordance with the Gricean Cooperative Principle, which requires that speakers be contextually relevant at the time of utterance. For example, *the United States* may metonymically denote a variety of entities closely associated with the country of this name, but only a contextually relevant interpretation would be intended by the speaker and would be chosen by the hearer – e.g. the sitting US president in *the United States decided to attack the Islamic State's forces inside Syria*, or a US women's soccer team in *the United States defeated China 1–0 to advance to the semifinals of the 2015 FIFA Women's World Cup*. Likewise, the lexical nominalization *half-pounder*, based on the noun *half-pound* and used in an expression like *Give me a half-pounder*, may denote a hamburger in a fast-food restaurant or a can of tobacco in a smoke shop. While many lexical nominalizations, listed as nouns in the lexicon, tend to have more uniform, fixed denotations, grammatical nominalizations, which are created **for the nonce**, do not have fixed denotations, and speech context plays an important role in determining and selecting the references most consistent with the context.

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<sup>1</sup> *Denotation* refers to the relationship between a linguistic form and concepts, both entity- and relational-concepts, connected with it, while *reference* is the denotation-mediated relationship between a nominal linguistic form and a real (or imaginary) world entity.



For example, the Spanish grammatical nominalization [el [que Ø es blanco]<sub>NMLZ</sub>] (the [NMLZR Ø is white]) ‘the one which is white’ can refer to a range of objects classed as masculine, instantiating its denotation of an entity that is white. In actual usage, the context and the Gricean Cooperative Principle determine the reference. So, *El que es blanco* would be understood to be referring to a white car when uttered in response to the question *¿Qué coche te gusta?* ‘Which car do you like?’ and a white hat when it answers the question *¿Qué sombrero usas hoy?* ‘Which hat do you wear today?’. There is nothing like a deletion of a head noun or a pronominal element involved here. The [el [que Ø es blanco] is a complete structure, a grammatical argument nominalization (see section 3.2), whose reference in discourse is determined by the context, exactly like the determination of the actual reference of a metonymic expression such as *the United States* following questions like ‘Who decided to attack the Islamic State’s forces inside Syria?’ or ‘Who defeated China 1–0 to advance to the semifinals of the 2015 FIFA Women’s World Cup?’ or the like.

## 2 Lexical and grammatical nominalizations

As a way of motivating less studied grammatical nominalizations, Shibatani (2017) discusses what he calls stem nominalization in Japanese that derives nouns (lexical nominalizations) from verb stems by attaching the -Ø suffix to vowel ending stems (e.g. *nagare-ru* [flow-PRS] ‘flows’ > *nagare* ‘flowing, a stream’) and the -i suffix to consonant ending stems (e.g. *koor-u* [freeze-PRS] ‘freezes’ > *koor-i* ‘ice’). These lexical nominalizations abound in Japanese and their forms nicely illustrate the metonymic nature of nominalizations as they occur either in isolation as in these examples or, more prevalently, in compound forms (e.g. *nezi+mawas-i* [screw+turn-NMLZR] ‘screw driver’) that denote states and events (*kumor-i* ‘cloudy state’, *hasir-i* ‘running/race’), event protagonists (*sur-i* ‘a pick pocket’ *hito+goros-i* [person+kill-NMLZR] ‘a killer’, *hi+yato-i* [day+employ-NMLZR] ‘a person employed on daily basis’), instruments (*hasam-i* ‘scissors’), resultant objects (*age* ‘fried tofu’), locations (*watas-i* ‘a landing’), and others that are metonymically related to the meanings of the verb stems.

While these lexical nominalizations, as nouns, must be distinguished from grammatical nominalizations that are typically larger in size than words and hence are not nouns, Shibatani speculates that the stem nominalization in question was once a productive grammatical nominalization on the basis of what Yamada (1908) calls *mokuteki juntaigen* ‘purposive grammatical nominalization’, shown in the following, where the -Ø/-i suffixes are seen in the adverbial use of what appear to be grammatical nominalizations.<sup>2</sup>

<sup>2</sup> Adverbial use of nominalizations, not discussed in this chapter is very common across languages.

- (1) a. *Takasi wa [hon o yom-i] ni tosyokan ni itta.*  
 Takashi TOP book ACC read-NMLZR<sup>3</sup> to library to went  
 'Takashi went to the library to read books.'
- b. *Takasi wa [gohan o tabe-Ø] ni uti ni yotta.*  
 Takasi TOP meal ACC eat-NMLZR to house at dropped.in  
 'Takashi dropped in at my house to eat a meal.'

Shibatani showed that these bracketed phrases are nominal by pointing out the parallel in syntactic function between them and nouns denoting activities (verbal nouns), as in the following examples.

- (2) a. *Takasi wa [siryoo no syuusyuu] ni tosyokan ni itta.*  
 Takashi TOP material GEN collecting to library to went  
 'Takashi went to the library to collect materials.'
- b. *Takasi wa [yoru no syokuzi] ni uti ni yotta.*  
 Takashi TOP night GEN dining to house at dropped.in  
 'Takashi dropped in at my house for an evening meal.'

While these grammatical nominalizations marked by the *-Ø/-i* suffixes occur in limited syntactic environments in Modern Japanese, they at least show a historical connection between well-established lexical nominalizations and less studied (and hence somewhat controversial) grammatical nominalizations, providing morphological evidence for the latter despite the necessity of distinguishing the two types of nominalizations on several morphosyntactic grounds.

In other languages, both the connection between lexical and grammatical nominalizations on the one hand and the distinction between them on the other are more clearly recognizable. To see this in English, observe the morphosyntactic similarities and differences between the lexical nominalization *shooting* in (3) and the grammatical nominalization *shooting the trespasser* in (4) below.

- (3) Lexical nominalization  
*a/the/John's reckless **shooting** of the trespasser* (upset the whole community)
- (4) Grammatical nominalization  
*\*a/\*the/John's recklessly **shooting the trespasser**<sup>4</sup>* (upset the whole community)

<sup>3</sup> In this chapter the abbreviation NMLZR is used to gloss a nominalizing morpheme, and NMLZ to mark a nominalization structure.

<sup>4</sup> There is historical evidence showing that this type of grammatical nominalization arose from the corresponding lexical nominalizations.

Besides the English case above, a wide range of languages across the globe provide evidence for grammatical nominalizations in terms of their intimate morphological connections to lexical nominalizations. Below are some randomly chosen samples from different language families of the Americas demonstrating this point.

(5) Tapiete (Tupí-Guaraní; Bolivia, Paraguay, Argentina; González 2003, Ciccone 2008)

a. Lexical nominalizations

(i) *hě'ě* 'be sweet' > *hé'ě-wă* 'sugar, honey'

(ii) *arika'e* 'long ago' > *ariká'e-wa* 'ancestors, history'

b. Grammatical nominalizations

(i) [*mbiri-wi ou-wa*]                      *kö'ëin-wai ou*<sup>5</sup>  
 far -DIR    3.come-NMLZR    in the morning    come (DIR=directional)  
 '(The one) who comes from far away has arrived this morning.'

(ii) [*kă'ä tenta-pe hau-wa*]                      *hayasi*  
 yesterday town-LOC    1.eat-NMLZR    be.rotten  
 'What I ate yesterday in town was rotten.'

(5b.i) is a subject grammatical nominalization that denotes an agentive entity (similar to the English agentive lexical nominalization *employer*) metonymically evoked by the nominalization structure marked by the nominalizer *-wa*, which also derives lexical nominalizations. (5b.ii) is an object grammatical nominalization denoting a patientive entity (similar to the English patientive lexical nominalization *employee*).

(6) Kashibo-Kakataibo (Panoan; Peru; Zariquiey 2011)

a. Lexical nominalizations

(i) *mapun-* 'to cover' > *mapun-kě* 'house' (297)

(ii) *tua-* 'to give birth' > *tua-kě* 'son of a woman' (297)

b. Grammatical nominalizations

(i) *ashi ka 'ën ñuikaskë 'iashín* (638)  
 a=ishi ka ['ë=n ñui-kas-kě] 'i-a-x-ín  
 that=only NAR.3p 1sg=A tell-DES-NMLZR be-PERF-3p-prox  
 'Only that was what I wanted to tell.' (NAR= narrative register)

(ii) *Juan hotelnu tëë-kë (a-x) ka asabi 'ikën* (632)  
 [Juan hotel=nu tëë-kě] (a-x) ka asabi 'ikën  
 Juan.ABS hotel=LOC work-NMLZR 3sg=S NAR.3p good be.3p  
 '(The fact) that Juan works in the hotel is good.'

<sup>5</sup> The glosses in the examples from other sources are mostly original, except for what I consider to be nominalizing morphemes. I took the liberty of glossing them as NMLZR.

Like Tapiete, Kashibo-Kakataibo has several different nominalizers for lexical and grammatical nominalization but the two processes do share the nominalizer *-kě*, as in the above. (6b.i) is a patient grammatical nominalization like the patient lexical nominalization in (6a.ii), while (6b.ii) is an event nominalization that metonymically denotes a fact pertaining to the event.

Turning to North America, we again observe widespread morphological connections between lexical and grammatical nominalizations demanding recognition of the latter as a type of nominalization. Here are some data from two different language families, one from Athabaskan, and the other from Northern Uto-Aztecan.

(7) Salve (Northern Athabaskan; Rice 1989)

a. Lexical nominalizations

(i) *ʔehdzo.i*

trap.NMLZR (cf. *ʔehdzo* ‘S/he traps something.’)  
‘a trap’

(ii) *dahʔz.i* (cf. *dahʔeʔa* ‘S/he hooks.’) (173)

hook.NMLZR  
‘fish hooks’

b. Grammatical nominalizations

(i) [*niwá kedaw’i*] *i* *ke gogháyeyida* (258)

long 3PL.sat NMLZR PL 1SG.saw.3PL  
‘I met ones who stayed a long time.’ (Hare dialect)

(ii) *ʔeyi dene [hodihshe]i* (19)

that man I know-NMLZR  
‘that man I know’

(8) Shoshone (Northern Uto-Aztecan; Dayley 1989)

a. Lexical nominalizations

(i) *hupiatüki* ‘to sing’ > *hupiatüki-ttü* ‘singer’ (237)

(ii) *waya* ‘to burn’ > *wayan-tün* ‘fire, burning’ (237)

b. Grammatical nominalizations

(i) [*ke tamangkan-tü*] *naamaa setü. Nümmi appü utü.* (476)

not tooth.having-NMLZR was this our (EXCL) father that  
‘He is one who is missing a tooth. That is our father.’

(ii) *Nüü [kunai wayan-tün]-na punikka.* (274)

I wood.O burn-NMLZR-O see (O=object)  
‘I see the wood burning.’

As evidence that the morphological connections between lexical and grammatical nominalizations are not confined to the Americas or to any one particular area or set of language groups, let us examine the following data from the Austronesian language Malagasy, where, besides so-called focus morphology, which is a nominalizing morphology itself (see section 3.2), there are several nominalizing prefixes that combine with different focus morphology. For example, in (9a) below, the nominalizer is a circumfix combining the *f-* prefix and the circumstantial focus suffix *-ina*. The same circumfix is used in forming event grammatical nominalizations, as in (9b).

(9) Malagasy (Austronesian)<sup>6</sup>

a. Lexical nominalizations

(i) *f-i-anar-ana*

NMLZR-AF.MID-advice-CF (MID=middle, CF=circumstantial focus)  
'school'

(ii) *f-am-ono-na olona*

NMLZR-AF-kill-CF human (AF=actor focus)  
'human killing, murder'

b. Grammatical nominalizations

(i) *mahafinaritra ny fandehadehanana miaraka amin'ny ankizy*  
mahafinaritra ny [f-an-dehadeha-**nana** miaraka amin-ny ankizy]  
fun INDEF NMLZR-AF-walk(rdpl)-CF outside with-IND child  
'Walking outside with children is fun.'

(ii) *hitako ny fikapohana ilay alike*  
hita-ko ny [f-i-kapoh-**ana** ilay alike]  
see.PF-IP.SG INDEF NMLZR-AF.MID-hit-CF DEF dog  
'The hitting of the dog was seen by me.'

### 3 Verbal-based nominalizations

Verbal-based grammatical nominalizations, like the ones given above, involve a verbal head possibly with nominal arguments. Shibatani distinguishes between event nominalizations and argument nominalizations. The former denote events and such abstract concepts as a state of affairs, a fact, or a proposition associated with the denoted events. They also denote event protagonists as well as resultant products (cf. resultative lexical nominalizations *a building*, *a painting*). The argument nominalizations, on the other hand, denote in a clearer manner concrete things and thing-like entities that are metonymically evoked by the verbal-based nominalization structures, such as an agentive event protagonist, a patientive protagonist, a beneficiary, an instrument, or a location in close association with the concepts denoted

<sup>6</sup> The examples without mention of the sources are from the author's own research.

by the verbal stems. The following examples illustrate these two types of V-based grammatical nominalizations in Japanese, where the event nominalization in (10) denotes a fact, the subject argument nominalization in (11a) denotes an agentive event protagonist, and the object argument nominalization in (11b) a patientive event protagonist.

(10) Event nominalization

*Masako wa [otto ni sonna onna ga ita]*  
 Masako TOP husband LOC such woman NOM existed  
*no o sitta.*  
 PRT ACC learned  
 ‘Masako learned that (her) husband had such a woman.’

(11) Argument nominalization

- a. [*Asoko de Ø koi o tutte iru*] *no wa*  
 there LOC carp ACC fish be.PRS PRT TOP  
*boku no ootoo da.*  
 I GEN y.brother COP  
 ‘(The one) who is fishing a carp there is my younger brother.’
- b. [*Asoko de ootoo ga Ø tutte iru*] *no*  
 there LOC y.brother NOM fish be.PRS PRT  
*wa koi da.*  
 TOP carp COP  
 ‘What my younger brother is fishing there is a carp.’

### 3.1 Event nominalizations

A major issue pertaining to event nominalizations has to do with the treatment of the following kind of construction.

- (12) *Taroo wa [ringo ga teeburu no ue ni aru] no o*  
 Taro TOP apple NOM table GEN top at exist PRT ACC  
*totte, poketto ni ireta.*  
 take.GER pocket in put  
 ‘Taro took an apple that was on top of the table and put it in his pocket.’

Following the description of similar constructions in the Yuman language Diegueño by Gorbet (1974), Kuroda (1992) analyzes sentences like (12) as internally-headed relative clauses, holding that an argument internal to the nominalization structure, *ringo* ‘apple’ in (12), functions as the head of the relevant structure and as an argument of the main clause predicate, *totte poketto ni ireta* ‘having taken (it), put (it) in his pocket’.

Shibatani (2017), comparing (12) and similar sentences with the type shown in (13), argued that all these sentences should be analyzed as event nominalizations that evoke event protagonists and resultant products.

- (13) a. *Ogata wa waratte [syuumai ni kiroi karasi o tappuri  
Ogata TOP smile.GER dumpling to yellow mustard ACC amply  
nutta] no o, ikioiyoku kuti no naka ni hoori konda.  
smeared PRT ACC vigorously mouth GEN inside to throw pushed  
'Ogata smiled and shoved into his mouth a dumpling smeared with lots  
of mustard.'*
- b. [*Sobo no katte iru zyuusimatu ga saezuru*]  
grand.mother GEN keep be society.finch NOM chirp  
*no o kiita.*  
PRT ACC heard  
'(I) heard the society finch chirp that (my) grandmother keeps.'

Notice that in the sentences above, it is not any argument internal to the event nominalization structure that semantically functions as an argument of the main clause predicate. In (13a), what Ogata shoved into his mouth is the result of his smearing yellow mustard on the dumpling. Similarly, in (13b) what the speaker heard was not the event of chirping by the society finch, but it was the result of that event, namely the chirping sounds. Analyzing (12) as an internally-headed relative clause leaves resultative nominalizations of the type seen in (13) unaccounted for.

Others (e.g. Keenan 1985, Cole 1987) who subscribe to the internally-headed relative clause analysis also fail to expand their data beyond the earlier observations and thus fail to recognize the likely fact that those languages permitting so-called internally-headed RCs allow sentences of the type shown in (13) (see the English translation for (13b)). For two languages said to have internally-headed relative clauses for which native speakers were available to the present author, this prediction turned out to be correct. The Tibeto-Burman language Qiang and Quechua permit the following kinds of sentences, in which the nominalization internal argument is not a semantic argument of the main clause.

- (14) Japanese  
*Ken wa [Hana ga mikan o sibotte kureta]*  
Ken TOP Hana NOM orange ACC squeeze.GER gave  
*no o hitoiki ni nonda.*  
PRT ACC one.gulp in drank  
Lit. 'Ken drank that Hana squeezed oranges for him in one gulp./Ken drank  
{the resultant product of} Hana's squeezing oranges for him in one gulp.'

## (15) Northern Qiang (Tibeto-Burman; courtesy of Chenglong Huang)

- a. [*themle-wu tɕytsətɕi ha-tɕa-tha-ji*] *lo-qu*  
 3PL-AGT orange-juice DIR-squeeze-PART-CSM DEF-CLF (CLF=classifier)  
*qa sə-tcha*. {Event protagonist metonymically evoked}  
 1SG DIR-drink.1SG  
 ‘I drank {the orange juice involved in} their squeezing orange juice.’
- b. [*themle-wu tɕytsə ha-tɕa-tha-ji*] *lo-qu*  
 3PL-AGT orange DIR-squeeze-PART-CSM DEF-CLF  
*qa sə-tcha*. {Resultant product metonymically evoked}  
 1SG DIR-drink.1SG  
 ‘I drank {the resultant product of} their squeezing oranges.’
- Cf. \**tɕytsə lo-qu qa sə-tcha*.  
 Orange DEF-CLF 1SG DIR-drink.1SG  
 ‘I drank oranges.’

## (16) Bolivian Quechua (Quechuan; courtesy of Jaime Daza)

- a. [*Maria(-q) wallpa-ta wayk'u-sqa-n]-ta mikhu-sayku*  
 Maria(-GEN) chicken-ACC cook-O.NMLZR-3-ACC eat-PROG.1PL.EXCL  
 ‘We are eating {the chicken involved in} Maria’s cooking a chicken.’  
 {Event protagonist evoked}<sup>7</sup>
- b. [*Maria(-q) laranjas-ta ch'irwa-sqa-n]-ta ujjani*  
 Maria(-GEN) oranges-ACC squeeze-O.NMLZR-3-ACC drink.1SG  
 ‘I drank {the resultant product of} Maria’s squeezing oranges.’
- Cf. \**Laranjas-ta ujjani*  
 oranges-ACC drink.1SG  
 ‘I drank oranges.’ {Resultant object evoked}

Actually, a simple event nominalization sentence like (10) is problematic for the internally-headed relative clause analysis, since (10) also lacks an internal argument that functions as the semantic argument of the main clause predicate; what Masako learned is a fact pertaining to the state of affairs of her husband having such a woman. The metonymy-based analysis of nominalization advocated by Shibatani treats all these cases of syntax-semantic mismatch uniformly as due to a metonymic effect, which is observed in simpler metonymic cases such as *Huro ga waita* ‘The bath {the bath water} has boiled’ and *Beetooben o kiku* ‘listen to Beethoven {B’s music >

<sup>7</sup> A case can be made that this is a resultative nominalization, meaning that what we are eating is the result of Maria’s cooking a chicken, namely the resultant cooked/roast chicken, not the chicken that Maria was cooking/roasting.



sounds of B's music}', where the semantic arguments of the predicates are something metonymically evoked rather than what the syntactic arguments literally denote.

### 3.2 Argument nominalizations

A major syntactic difference between event nominalizations and argument nominalizations is that the former, as in (10) above, do not have an obligatory gap, while the latter obligatorily have a gap in the argument position, as in the examples in (11). These gaps indicate the grammatical roles the denotations of argument nominalizations play, such that a nominalization with a gap in subject position denotes an entity playing the subject role, as in (11a), and one with a gap in object position denotes an entity playing the object role, as in (11b). They are grammatical counterparts of lexical argument nominalizations of the type, *employer* (agent nominalization) and *employee* (patient nominalization).

The Japanese argument nominalization patterns in (11) are paralleled in Korean, Chinese, and many other languages, in which the only clue for the type of argument nominalized is the position of a gap (or a missing argument) in the nominalization structure, as seen below.

#### (17) Korean

- a. [ceki-eyse Ø inge-lul nakk-ko iss-nun] key nay tongsayng-i-ya.  
 there-at carp-ACC fish-GER be-NMLZR PRT my y.brother-COP-IND  
 '(The one) who is fishing carp there is my younger brother.'
- b. [ceki-eyse nay tongsayng-i Ø nakk-ko-iss-nun] key inge-i-ya.  
 there-at my y.brother-NOM fish-GER-be-NMLZR PRT carp-COP-IND  
 'What my younger brother is fishing there is carp.'

#### (18) Mandarin Chinese

- a. [Ø zài nàr diào lǐyú]=de shì Xiǎo Wáng.  
 PROG there fish carp=NMLZR COP Little Wang  
 '(The one) who is fishing carp there is Little Wang.'
- b. [Xiǎo Wáng zài nàr diào Ø] =de shì lǐyú.  
 Little Wang PROG there fish =NMLZR COP carp  
 'What Little Wang is fishing there is carp.'

Other languages depart from these patterns of argument nominalizations in two ways. One is the pattern found in several languages in the mainland Southeast Asia, Semitic languages, Iranian, and some others, where the argument nominalized is marked by a pronoun rather than by a gap. These languages actually combine the

gap strategy and the pronoun strategy, where subject nominalization is marked by a gap, object nominalization by either a gap or a pronoun, and oblique nominalizations by a pronoun. Observe the following data from Thai, which may have a pronoun in subject position, and Modern Hebrew, where non-subject positions allow or require a pronoun.

- (19) Thai (Tai-Kadai; Yaowapat and Prasithrathsint 2009)

*thəə mây khuan kin yaa [thîi Ø/ **man** môtʔaayúʔ]*<sup>8</sup>  
 2.SG not should eat medicine NMLZR 3.SG expire  
 ‘You should not take the medicine which expired.’

- (20) Modern Hebrew (Semitic)

- a. *Zo she=[ Ø boxa] xi xavera sheli.*  
 this.FEM NMLZR cries is friend mine  
 ‘The (one) who is crying is my friend.’
- b. *Zo she=[Yoav raa Ø/ **ota** etmol] xi xavera sheli.*  
 this.FEM NMLZR=Yoav saw her yesterday is friend my  
 ‘The (one) whom Yoav saw yesterday is a friend of mine.’
- c. *Ze [sixakti ito etmol] haya shovav.*  
 this.MSC 1.played with.him yesterday was naughty  
 ‘The (one) with whom I played yesterday was naughty.’

Other widespread patterns of argument nominalizations that differ from the patterns of Japanese, Thai, and Modern Hebrew above combine the gap strategy and morphological marking that points to the types of the argument nominalized. A simpler system of this type just distinguishes between subject nominalization and object (or non-subject) nominalization, as in Bolivian Quechua (*-q* for subject nominalization; *-sqa* for object nominalization – see (48) and (66) below), or as in Turkish (*-En* for subject nominalization; *-dik/-cek* plus a personal suffix for object nominalization). Languages may have additional markers distinguishing different types of argument nominalization. Northern Qiang has markers for agent nominalization (*-m*, etc.), patient nominalization (*-Ø + GEN*), and instrumental nominalization (*-s*, etc.), whereas Yaqui has a marker for locative nominalization in addition to those marking subject and object nominalizations, as seen below.

- (21) Yaqui (Southern Uto-Aztecan; Alvarez 2012)

- a. *U-me [Ø bwa'am-ta joa-me] pu'ato-m tapejti-po joa-k.*  
 DET-PL lunch-ACC do-SUB.NMLZR plate-PL tapanco-LOC put-PERF  
 ‘The ones who are cooking, they put the plate on the *tapanco* alter.’

<sup>8</sup> My Thai consultant finds the form with the pronoun less felicitous than the one with a gap.

- b. *U* [itom Ø nu'upa-ka-'u] kaa jaleki.  
 DET 1PL.GEN bring-PERF-OBJ.NMLZR NEG enough  
 'What we brought is not enough.'
- c. *U* [in Ø tekipanoa-'apo] mekka taawa.  
 DET 1.SG.GEN work-LOC.NMLZR far be  
 '(The place) where I work is far.'

The Tupian language Kamaiurá in the Amazonian Basin in Brazil displays one of the most fine-grained systems, distinguishing not only the transitive subject (A), intransitive subject (S), and the transitive object (O), but also a theme object (TH) and several others for obliques, according to Seki (2000).

(22) Kamaiurá (Tupí-Guaraní; Brazil; Seki 2000 and p.c.<sup>9</sup>)

A: -tat/-tar

- a. *ka'i-a* juka-**tar**-er-a  
 monkey-Nu kill-A.NMLZR-PAST-Nu  
 '(one) who killed a monkey'

S: -ma'e

- b. *o-'ata-ma'e* (122)  
 3-walk-S.NMLZR  
 'that which/who walk.'
- b'. *i-pitsun-ama'e* (179)  
 3-black-S.NMLZR  
 'that which is black'

O (patient): -emi

- c. *je=r=emi-juka* (121)  
 1SG=RELATIONAL-O.NMNLZR-kill  
 'what I killed'

TH (theme): -ipyt/-pyr

- d. *i-mono-pyr*-er-a *Sau Paulo* *katy*  
 3-send-TH.NMLZR-PST-Nu direction  
 'one sent to São Paulo'

<sup>9</sup> It is with great regret that I record here the death of Lucy Seki on June 24, 2017, even as I cite from her monumental grammar of Kamaiurá, which surpasses in both content and quality any grammar ever written on an indigenous language of South America.

Location/Instrument: *-tap/-ap/-taw/-aw*

e. *i-jo-taw-er-a*

3-go-L.NMLZR-PST-N

‘place where he went out from’

f. *moĩ-a juka-taw-er-a*

cobra-N kill-I.NMLZR-PST-N

‘thing with which I killed the cobra’

The basic function of the much-debated Austronesian focus morphology appears to be that of marking the types of argument nominalization. Mayrinax Atayal of Taiwan preserves the four-way focus contrast of the proto-Austronesian, where, as seen below, the actor focus (AF) marking indicates a subject argument nominalization, the patient focus (PF) marking an object nominalization, the locative focus (LF) marking a locative nominalization, and the circumstantial focus (CF) a benefactive or instrumental nominalization.

(23) Mayrinax Atayal (Austronesian; based on Huang 1995)

a. *βaq-un=mu ku? [m-aquwas Ø] ka? haca?* (Actor focus)

know-PF=1SG.GEN NOM.REF AF-sing LIN that (LIN=linker)

‘I know that singer/one who is singing there.’

b. *ma-hnuq ku? [β-in-ainay Ø nuk? naβakis]*. (Patient focus)

AF-cheap NOM.REF buy<PF.REALIS>buy GEN.REF old.man (REF=referential)

‘What the old man bought was cheap.’

c. *yayhapuyan ku? [naniq-an Ø cu? βunja? nku?*

kitchen NOM.REF eat-LF ACC.NONREF yam GEN.REF

*ʔulaqi?*). (Locative focus)

child

‘The kitchen is (the place) where the child eats yam.’

(NONREF=non-referential)

d. *ini=mu s? wa?=i ku? [si=ghahapuy Ø nku? kanairil]*.

NEG=1SG like=LF NOM.REF CF=cook GEN.REF woman

‘I don’t like the one for whom the woman cooks.’ (Circumstantial focus)

Turning now to Indo-European languages, we recognize that many of them have similar, if partial, marking systems for their grammatical argument nominalizations. Perhaps one of the most complete systems is found in German, where the following four types of argument nominalization are morphologically distinguished.

## (24) German

- a. *Ich treffe den, [der [Ø morgen kommt]].*  
 I meet ART SUB.NMLZR tomorrow comes  
 'I meet the one who comes tomorrow.'
- b. *Ich treffe den, [den [du mir Ø vorgestellt hast]].*  
 I meet ART DO.NMLZR you me introduce have  
 'I meet the one whom you introduced to me.'
- c. *Ich treffe den, [dem [du Ø den Brief gegeben hast]].*  
 I meet ART IO.NMLZR you ART letter give.PP have  
 'I meet the one to whom you gave the letter.'
- d. *Ich treffe den, [dessen [Ø Kopf gross ist]].*  
 I meet ART GEN.NMLZR head big is  
 'I meet the one whose head is big.'

Modern English, on the other hand, has a very limited system that allows marking only object nominalizations in a unique way in formal style, as below.<sup>10</sup>

## (25) English

- a. *You should marry [who/\*whom [Ø loves you]].* (Subject nominalization)
- b. *You should marry [who/whom [you love Ø]].* (Object nominalization)

We have examined above the forms and the meanings of both event nominalizations and argument nominalizations. We now turn to their uses and functions.

### 3.3 Structures and their use

Shibatani (2009, 2017) makes the strong claim that all relative clauses are in fact simply uses of grammatical argument nominalizations. In this analysis, so-called headless relative clauses are instances of NP-use of argument nominalizations and headed RCs are instances of modification-use of argument nominalizations. Shibatani argues that nominalizations, as quasi-nominals, have these two major uses just like any ordinary nouns. The parallelism between the use of nouns and argument nominalizations is illustrated by the English examples below (see Figures 1 and 2, next page).

The NP-use of nominals is associated with the referential function of the NP that they head. The modification-use of nominals, on the other hand, is associated with a restrictive function in so-called restrictive relative clauses or an identification function in so-called non-restrictive, appositive relative clauses. Shibatani's point is that just as nouns do not become adjectives in their modification use, nominalizations do not become relative clauses under the modification-use. In the next section we offer

<sup>10</sup> English, actually, has a rich system marking possessive and adverbial nominalizations that are distinguished in terms of so-called relative pronouns, *whose*, *where*, *when*, *why*, and *how*, all of which we would reanalyze as nominalizers.

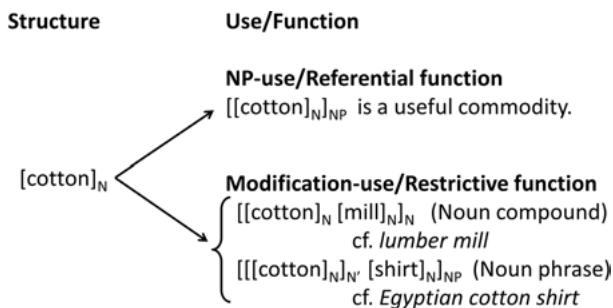


Figure 1: Two uses of noun

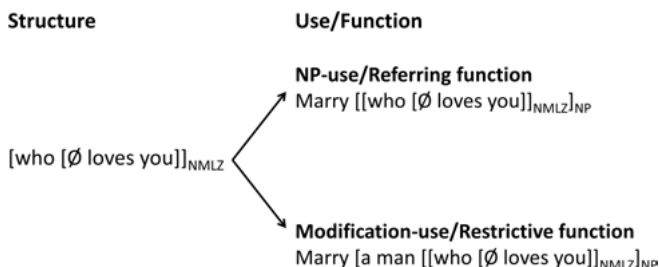


Figure 2: Two uses argument nominalization

evidence that so-called relative clauses are not really clauses, let alone sentences, as widely believed. For now, let us observe that a variety of languages and language families from around the globe show the two uses of grammatical nominalizations seen in Figure 2.<sup>11</sup>

(26) Japanese

- a. *Ken wa [[Ai ga motte kita]<sub>NMLZ</sub> no<sup>12</sup>]<sub>NP</sub> o tabeta.*  
 Ken TOP Ai NOM carry.GER came PRT ACC ate  
 'Ken ate what Ai brought.'

<sup>11</sup> Besides these two uses, many languages make use of event nominalizations as adverbs. Notice that not all nominalizations within a single language may show all these uses. Nominalizations may specialize for an NP-use or for a modification-use, and that specialization may vary over time or among dialects. For example, the mainstream dialects of Modern English have specialized *what*-nominalizations for NP-use only such that we cannot use the construction as a modifier (*\*the book what I bought yesterday*). But the dialects in East Anglia, UK allow them to function as modifiers (e.g. *Gemma screamed at the man what crashed into our car. That's the cat what he picked from the sanctuary*. Hughs and Trudgill 1979: 17–18.)

<sup>12</sup> The particle *no* here is not a nominalizer. It is a marker of NP-use of a grammatical nominalization occurring only when the nominalization is used as an NP-head, as in this example (see its absence in the modification-use in (26b)). Similar markers are also seen in many other languages, as seen in the data below. See section 6.1 on the role of these markers.

- b. *Ken wa [[Ai ga motte kita]<sub>NMLZ</sub> ringo]<sub>NP</sub> o tabeta.*  
 Ken TOP Ai NOM carry.GER came apple ACC ate  
 'Ken ate the apples that Ai brought.'

(27) Korean

- a. *[Yenghi-ka ilk-un] kes-un acwu elyep-ta.*  
 Yonghee-NOM read-NMLZR PRT-TOP very difficult-IND  
 'What Yonghee read is very difficult.'
- b. *[Yenghi-ka ilk-un] chayk-un acwu elyep-ta.*  
 Yonghee-NOM read-NMLZR book-TOP very difficult-IND  
 'The book that Yonghee read is very difficult.'

(28) Mongolian (Altaic, Chakhar dialect; courtesy of Bayaerduleng)

- a. *[[Tend jugsuj bai-ga]<sub>NMLZ</sub> ni]<sub>NP</sub> man u huuhd.*  
 there standing be-STAT 3.POSS we GEN child  
 'The one standing there is our child.'
- b. *[[Tend jugsuj bai-ga]<sub>NMLZ</sub> huuhd]<sub>NP</sub> bel man-ai.*  
 there standing be-STAT child TOP we-GEN  
 'The child who is standing there is ours.'

(29) Mandarin Chinese

- a. *[[Wǒ zuótiān mǎi-de]<sub>NMLZ</sub> ni]<sub>NP</sub> hěn guài.*  
 I yesterday buy-NMLZR very expensive  
 'What I bought yesterday was very expensive.'
- b. *[[Wǒ zuótiān mǎi-de]<sub>NMLZ</sub> shū]<sub>NP</sub> hěn guài.*  
 I yesterday buy-NMLZR book very expensive  
 'The book that I bought yesterday was very expensive.'

(30) Thai (courtesy of Kingkarn Thepkanjana)

- a. *chǎn chǎp [[thīi khwěen nay tūu]<sub>NMLZ</sub>]*<sub>NP</sub>  
 I like NMLZR hang in closet  
 'I like the one that is hanging in the closet.'
- b. *chǎn chǎp [kràp-roon [thīi khwěen nay tūu]<sub>NMLZ</sub>]*<sub>NP</sub>  
 I like skirt NMLZR hang in closet  
 'I like the skirt that is hanging in the closet.'

## (31) Mayrinax Atayal (based on Huang 1995)

- a. *βaq-un=mu ku? [[m-aquwas]<sub>NMLZ</sub>] ka? haca?*<sub>NP</sub>  
 know-PF=1SG.GEN NOM.REF AF-sing LIN that  
 'I know that one who is singing there.'
- b. *βaq-un=mu ku? [kanairil ka? [m-aquwas]<sub>NMLZ</sub> ka? haca?*<sub>NP</sub>  
 know-PF=1SG.GEN NOM.REF woman LIN AF-sing LIN that  
 'I know that woman who is singing there.'

## (32) Sasak (Pancor ngeno=ngené dialect; Lombok Island, Indonesia; Western Malayo-Polynesian)

- a. *Beng oku [[si léq méje]<sub>NMLZ</sub> ino]<sub>NP</sub>*  
 give I NMLZR on table the  
 'Give me the one that is on the table.'
- b. *Beng oku [buku [si léq méje]<sub>NMLZ</sub> ino]<sub>NP</sub>*  
 give I book NMLZR on table the  
 'Give me the book that is on the table.'

(33) Kalkatungu<sup>13</sup> (Pama-Nyungan; Australia; Blake 1979)

- a. *kaanta-na pakaik-ka kalpuru-tiŋu [[niŋ-ti ŋu-na ŋaŋa]<sub>NMLZ</sub>]<sub>NP</sub> (101)*  
 leave-PST that-Ø Boulia-ABL you-ERG NMLZR-ACC saw  
 'The one whom you saw left Boulia.' (Ø=a morpheme without a referential content)
- b. *ŋai utantiŋi-na [pa-u ŋaur-ku [niŋ-ti ŋu-na laji]<sub>NMLZ</sub>]<sub>NP</sub> (101)*  
 I look after-PAST that-DAT child-DAT you-ERG NMLZR-ACC hit  
 'I've been looking after that kid you belted.'

## (34) Telugu (Dravidian, southern India; courtesy of K.V. Subbarao)

- a. *neenu [[John icc-in-a]<sub>NMLZ</sub> di cadiveenu*  
 I give-PST-NMLZR PRT read  
 'I am reading what John gave me.'
- b. *neenu [[John icc-in-a]<sub>NMLZ</sub> pustakam]<sub>NP</sub> cadiveenu*  
 I give-PST-NMLZR book read  
 'I am reading the book that John gave me.'

<sup>13</sup> Kalkatungu being an extremely "flat" language, the constituency of relevant phrases below is not entirely certain. It is clear that there is a nominalizer and that a nominalization can function as a subject and can modify a noun.



## (35) Hindi (Indo-Aryan; courtesy of Miki Nishioka)

- a. *main* [*us*        *kii*        *xariidii*        *huii*]  
 I        s/he.OBL GEN.F.SG buy.PFV.F.SG/PL be.PFV.F.SG/PL  
*paRh rahaa*        *huU*  
 read PROG.M.SG be.PRS.1SG  
 'I am reading what s/he bought.'
- b. *main* [*us*        *kii*        *xariidii*        *huii*]        *kitaab*]  
 I        s/he.OBL GEN.F.SG buy.PFV.F.SG/PL be.PFV.F.SG/PL book.F.SG  
*paRh rahaa*        *huU*  
 read PROG.M.SG be.PRS.1SG  
 'I am reading the book that s/he bought.'

## (36) Abkhaz (North West Caucasian; courtesy of George Hewitt)

- a. [[*'jy.b.taxy.w*]<sub>NMLZ</sub>]<sub>NP</sub>        *d.ga*  
 whom.you(FEM).want.Non-Finite/STAT/PRS 3SG.take(IMP)  
 'Take whom you (Female) want!'
- b. [[*'jy.b.taxy.w*]<sub>NMLZ</sub>        *a-xàc' a*]<sub>NP</sub>  
 whom.you(FEM).want.Non-Finite/StAT/PRS article-man  
*d-aa-wèit'*  
 he-comes-PRS/Finite/Non-STAT  
 'Here comes the man whom you want.'

## (37) Modern Hebrew (Semitic)

- a. *zo*        [[*she boxa*]<sub>NMLZ</sub>]<sub>NP</sub> *xi xavera sheli*  
 this.FEM NMLZR cries        is friend mine  
 'The one (feminine) who is crying is my friend.'
- b. [*Ha yalda* [*she boxa*]<sub>NMLZ</sub>]<sub>NP</sub> *xi xavera sheli*  
 the girl NMLZR cries        is friend mine  
 'The girl who is crying is a friend of mine.'

## (38) German (Germanic, Indo-European)

- a. *Ich treffe* [*den, [der*        *morgen kommt*]<sub>NMLZ</sub>]<sub>NP</sub>.  
 I meet ART SUB.NMLZR tomorrow comes  
 'I meet the one who comes tomorrow.'
- b. *Ich treffe* [*den Mann, [der*        *morgen kommt*]<sub>NMLZ</sub>]<sub>NP</sub>.  
 I meet ART man SUB.NMLZR morning comes  
 'I meet the man who comes tomorrow.'

## (39) Spanish (Romance, Indo-European)

- a. [*El [que está leyendo un libro]<sub>NMLZ</sub>*]<sub>NP</sub> *es mi padre.*  
 the NMLZR is reading a book is my father  
 ‘The one who is reading a book is my father.’
- b. [*El hombre [que está leyendo un libro]<sub>NMLZ</sub>*]<sub>NP</sub> *es mi padre.*  
 the man NMLZR is reading a book is my father  
 ‘The man that is reading a book is my father.’

## (40) Kanuri (Nilo-Saharan; Hutchison 1981)

- a. *àwó<sup>14</sup> [[nyà gàlàngîn]=dô<sup>15</sup> fàné!*  
 thing to.you 1SG.advise=DET 2SG.listen.IMV  
 ‘Listen to what I am advising you.’
- b. [*kâm [rúkâ nâ]<sub>NMLZ=dô</sub>*]<sub>NP</sub> *sàwànâm*  
 person 1SG.saw=DET your.friend  
 ‘The person that I saw is your friend.’

## (41) Chichewa (Bantu; Mchombo 2004, p.c.)

- a. [*zi-méné mú-kú-zí-fũn-a*] *zi-li pa chulu.*  
 10-NMLZR 2.PL-PRS-10OM-want-fv 10-be 16.LOC 7.anthill  
 ‘What you want are on the anthill.’ (OM=object marker; fv=final vowel)
- b. *Mbuzi* [*zi-méné mú-kú-zí-fũn-a*] *zi-li pa chulu.*  
 10.goats 10-NMLZR 2.PL-PRS-10OM-want-fv 10-be 16.LOC 7.anthill  
 ‘The goats that you want are on the anthill.’

## (42) Central AlaskanYup'ik (Eskimo-Aleut; Miyaoka 2012)

- a. [*Tau-na [neqe-m ii-ngan nere-sti-i]<sub>NMLZ</sub>*]<sub>NP</sub>  
 that-EE.ABS.SG fish-REL.SG eye-REL.3SG.SG eat-A.NMLZR-ABS.3SG.SG  
*kass'a-u-llini-uq* (543)  
 white.man-be-EVD-IND.3SG  
 ‘(I see now) that one who is eating the fish eye is a white man.’
- b. [*[neqe-m nere-sti-i]<sub>NMLZ</sub> qimugta*]<sub>NP</sub> (533)  
 fish-REL.SG eat-A.NMLZR-ABS.3SG.SG dog.ABS.SG  
 ‘the dog that eats the fish’

<sup>14</sup> See section 6.1 on the role of this noun.

<sup>15</sup> It is not clear whether the determiner *dô* is part of the nominalization (i.e. a nominalizer) or part of the NP

(43) Lakhota (Siouan, North America; van Valin 1977)

- a. [[*ʃu'kawakhâ wa ima'kicu ki he*]<sub>NMLZ</sub>]<sub>NP</sub> *wâyâ'ke* (81)  
 horse a he.takes.it.from.me DET NMLZR he.sees.him  
 'He saw the one who took a horse from me.'

- b. [*wicha'šâ ʃu'kawakhâ wa ima'kicu ki he*]<sub>NMLZ</sub>]<sub>NP</sub>  
 man horse a he.takes.it.from.me DET NMNMLZR  
*wâyâ'ke he?* (79-80)  
 he.sees.him Q  
 'Did he see the man who took a horse from me?'

(44) Navajo (Southern Athabaskan, North America; Willie 1989)

- a. [[*'at'ééd yizts'os-yéé*]<sub>NMLZ</sub>]<sub>NP</sub> *yaltí'* (435)  
 girl 3sO:3sS:kiss-NMLZR speaking  
 'The one who kissed the girl is speaking.'
- b. [*'ashikii 'at'ééd yizts'os-yéé*]<sub>NMLZ</sub>]<sub>NP</sub> (415)  
 boy girl 3sO:3sS:kiss-NMLZR  
 'the boy who kissed the girl'

(45) K'ichee' (Mayan, Guatemala; Larson & Norman (1979: 357), and courtesy of Nora England and Telma Can Pixabaj)

- a. *x-Ø-inw-il* [*lee* [*x-Ø-u-ch'ay lee achi*]]<sub>NMLZ</sub>]<sub>NP</sub>  
 ASP-3SG.ABS-1SG.ERG-see NMLZR ASP-3SG.ABS-3SG.ERG-hit the man  
 'I saw the one whom the man hit./I saw the one who hit the man.'
- b. *x-Ø-inw-il* [*lee ixoq* [*lee* [*x-Ø-u-ch'ay lee achi*]]]<sub>NMLZ</sub>]<sub>NP</sub>  
 ASP-3SG.ABS-1SG.ERG-see the woman NMLZR  
 ASP-3SG.ABS-3SG.ERG-hit the man  
 'I saw the woman whom the man hit/I saw the woman who hit the man.'

(46) Hixkaryana (Carib, northern Brazil; Derbyshire 1999)

- a. [[*t-ono-saho*]<sub>NMLZ</sub>]<sub>NP</sub> *koso* (48)  
 IMPERS-eat-O.NMLZR deer  
 'The deer (was) what was eaten.'
- b. *miriri erahma-phi-i-ya* [*tí-rui* [*ni-kupi-hpi*]]<sub>NMLZR</sub> (57)  
 that see-PST-3-ERG 3REFL-brother O.NMLZR-do-PST  
 'He saw that, what his brother had done.'

## (47) Kashibo-Kakataibo (Zariquiey 2011)

- a. *Marianën* 'akukë a kana pian (642)  
 [[*Maria-nën* Ø 'aku-kë]<sub>NMLZ</sub>]<sub>NP</sub> a kana pi-a-n  
 Maria-ERG cook-NMLZR 3SG.O NAR.SG eat-PERF1/2P  
 'I ate what Maria cooked.'
- b. *ain* bënën 'akë buë (634)  
 [[*ain* bënë=n Ø 'a-kë]<sub>NMLZ</sub> buë]<sub>NP</sub>  
 3.GEN husband=ERG do-NMLZR fish.esp  
 'the fish that her husband fished'

## (48) Bolivian Quechua (Quechuan)

- a. [[*Maria-q wayk'u-sqa-n*]<sub>NMLZ</sub>]<sub>NP</sub>-ta mik''u-sayku  
 Maria-GEN cook-O.NMLZR-3SG-ACC eat-PROG.1PL.EXCL  
 'We are eating what Maria cooked.'
- b. [[*Maria-q wayk'u-sqa-n*]<sub>NMLZ</sub> wallpa]<sub>NP</sub>-ta mik''u-sayku  
 Maria-GEN cook-O.NMLZR-3SG chicken-ACC eat-PROG.1PL.EXCL  
 'We are eating the chicken that Maria cooked.'

## (49) Tapiete (Ciccone 2008)

- a. *á-ha-po* a-hapi [[kwé(we) a-yasíya-wa]<sub>NMLZ</sub>]<sub>NP</sub> (5)  
 1SG.AC-go-FUT 1SG.AC-light before 1SG.AC-cut-NMLZR  
 'I am going to light what I cut last time.'
- b. *hau ye* [waka ro'o [a-mbaku-wa]<sub>NMLZ</sub>]<sub>NP</sub> (27)  
 1:eat already cow meat 1.SG.AC-heat-NMLZR  
 'I already ate the meat that I heated.'

## (50) Toba (Guaicuruan, Bolivia, Paraguay, Argentina; Messineo and Porta (2009) and Cristina Messineo p.c.)

- a. [so [(maʒi)<sup>16</sup> neta'age da Chaco]<sub>NMLZ</sub>]<sub>NP</sub> i-waGan so Juan  
 DD (NMLZR) 3.exist.DIR DD Chaco 3-hit DD Juan  
 'The one who lives in Chaco hit Juan.' (DD=demonstrative determiner)
- b. [so fijaGawa [(maʒi) neta'age da Chaco]<sub>NMLZ</sub>]<sub>NP</sub> i-waGan so Juan  
 DD man (NMLZR) 3.exist.DIR DD Chaco 3-hit DD Juan  
 'The man who lives in Chaco hit Juan.'

<sup>16</sup> *maʒi* or *maʒe* also nominalizes demonstrative determiners giving rise to third person pronouns; e.g. *ñi-maʒe* [DD.sitting-NMLZR] 'he (sitting), the one sitting', *a-so-maʒe-pi* [FEM-DD.distal-NMLZR-PL] 'they (FEM over there), those (FEM) over there' (Messineo 2003 and p.c.)

Many more similar examples could easily be adduced, but the above is perhaps enough to dispel the widely-accepted analyses of so-called relative clauses as independent structures apart from nominalizations, analyses that give rise to limited observations such as “a somewhat more rare function of nominalization: as a relative clause modifying a head noun” (Comrie and Thompson 2007: 378) or claims like “in certain languages relativization is indistinct from nominalization” (Comrie and Thompson 2007: 379) that suggest that relativization and nominalization are in principle two distinct structures.<sup>17</sup>

### 3.3.1 Relative clause constructions

As shown above, our analysis of relative clause constructions is straightforward. While it captures Comrie and Thompson’s observation on the use of nominalizations as relative clauses, it departs from the traditional analysis in several ways. The traditional analysis of RC constructions based on English makes crucial reference to the role of so-called relative pronouns, such as *who* and *which*, that play the double role of indicating the dependency relation between the pronoun and a gap within an RC and of holding the perceived anaphoric relation with the head noun, as in the following, giving rise to the term “relative pronoun”.

(51) the man<sub>i</sub> [whom<sub>i</sub> [you love Ø<sub>i</sub>]]

Such an analysis is problematic when applied to other languages in that many, if not most, languages do not use anything like relative pronouns.<sup>18</sup> Most descriptions of RC constructions in a variety of languages label an element marking what look like RCs as REL or as a relative pronoun. This practice, however, has not been independently justified in any of such descriptions; they simply follow the analysis of (51) based on English. They are best analyzed as nominalizers, as indicated by our relabeling of them in the examples cited above. Even in English, we can advance an argument for treating *who*, *which*, etc. as indefinite pronouns used as nominalizers or markers of nominalization (in addition to their use as interrogative pronouns, which may have developed from the nominalizing *wh*-forms). The use of indefinite pronouns as nominalizers make good sense because what argument nominalizations denote may be indefinite (e.g. [*Who gets there first*] *gets the prize*; *You may choose* [*which you find most appealing*]).

<sup>17</sup> Views much wider than these and that are consistent with our analysis have been expressed by those working on Tibeto-Burman languages. DeLancey (2002: 56), for example, notes that “[t]he fundamental relativization pattern is the same throughout the family: relativization is a subspecies of clausal nominalization. The modifying clauses is nominalized, and then stands in either a genitive or appositive relation to the head noun.” See Newar examples (80), (81), and (103) in the text illustrating DeLancey’s point. See also Noonan (1997, 2008).

<sup>18</sup> Because of this some grammarians say that their languages do not have relative clauses (e.g. Jones and Jones (1991: 149)). A more accurate way to say this is that their languages do not have the English-style relative clauses.

Our point is that relativization does not depend on so-called relative pronouns as in (51) and that the perceived relation between so-called relative pronouns and gaps in RC can be captured in terms of the role-marking morphology discussed in the preceding section. For example, the German nominalizers *der* and *den*, for example, mark the grammatical role of the entity denoted by an argument nominalization; they are a subject nominalizer and an object nominalizer that marks (or combines with) a subject nominalization and an object nominalization, respectively, as below.

## (52) German

- a. *Ich treffe [den Mann, [der [Ø morgen kommt]]<sub>SUB.NMLZ</sub>]<sub>NP</sub>*  
 I meet ART man SUB.NMLZR morning comes  
 'I meet the man who comes tomorrow.'
- b. *Ich treffe den, [den [du mir Ø vorgestellt hast]]<sub>DO.NMLZ</sub>*  
 I meet ART DO.NMLZR you me introduce have  
 'I meet the man whom you introduced to me.'

A requirement in languages with role-marking nominalization morphology like German is that the morphology correctly indicate the type of argument nominalization involved. That is, a subject nominalizer must combine with a subject argument nominalization with a gap in subject position, as in (52a), and an object nominalizer with an object argument nominalization with a gap in object position, as in (52b). The role of the English nominalizer *whom* is exactly the same as that of the German DO nominalizer *den* in (52b) (except for the additional gender information coded in the latter). All languages with role-indicating morphology examined in section 3.2 have similar requirements, which are similar in type to gender agreement between a modifier and a head noun (e.g. Portuguese *meu carro* [my.MSC car.MSC] 'my car', *minha casa* [my.FEM. house.FEM] 'my house') (see section 6.2 for an important implication of these points in the analysis of relative clause constructions).

While many languages are similar to German in having role-indicating morphology, there are many others that do not; accordingly, such morphology, like so-called relative pronouns, is not an obligatory feature of RC constructions, as can be seen in the Japanese and Toba pattern below.

## (53) Japanese

- a. *[[Ø hon o yomu]<sub>SUB.NMLZ</sub> kodomo]<sub>NP</sub>*  
 book ACC read.PRS child  
 'a child who reads a book'
- b. *[[kodomo ga Ø yomu]<sub>OBJ.NMLZ</sub> hon]<sub>NP</sub>*  
 child NOM read.PRS book  
 'a book which a child reads'

(54) Toba (Messineo and Porta 2009)<sup>19</sup>

- a. *so* [*ʃijaGawa* [ $\emptyset$  *i-waGan* *a-so* *qaʔaʔnole*]<sub>SUB.NMLZ</sub>]<sub>NP</sub> (57)  
 DD man 3A-hit FEM.DD young.lady  
 ‘the man who hit the young lady’
- b. *so* [*ʃijaGawa* [*a-so* *qaʔaʔnole* *i-waGan*  $\emptyset$ ]<sub>OBJ.NMLZ</sub>]<sub>NP</sub> (57)  
 DD man FEM.DD young.lady 3A-hit  
 ‘the man whom the young lady hit’

The examples of RC constructions above indicate that the minimal requirement, the essential feature of RC constructions, is that they involve as a modifier an argument nominalization with a gap (or a pronoun as in Thai and Modern Hebrew seen earlier) in an argument (or an adjunct) position. The relevant argument nominalizations may not have any explicit morphology marking nominalizations, as in Modern Japanese and Toba ((53) and (54) above), or as in the English form *the book* [*John bought*  $\emptyset$ ], may involve a nominalizing morphology, which indicates the grammatical role of the entity denoted by the nominalization, as in German in (51), or may simply mark nominalization without indicating the grammatical role, as with the English forms *who*, *which*, or *that*, or Chinese *de* (see (18)). These considerations suggest the following analysis of RC constructions.

(55) a. Japanese

[[ $\emptyset^i$  *hon* *o* *yomu*]<sub>SUB.NMLZ</sub> *kodomo*]<sub>NP</sub>  
 book ACC read.PRS child  
 ‘a child who reads a book’

b. Chinese

[[ $\emptyset^i$  *zài* *nàr* *diào lǐyú*]<sub>SUB.NMLZ=de</sub>]<sub>SN'</sub> *háizi*]<sub>NP</sub>  
 PROG there fish carp=NMLZR child  
 ‘a child who is fishing there’

c. German

[*der Mann* [[*der* [ $\emptyset^i$  *dich liebt*]<sub>SUB.NMLZ</sub>]<sub>SN'</sub>]<sub>NP</sub>  
 the man SUB.NMLZR you love  
 ‘the man who loves you’

d. English

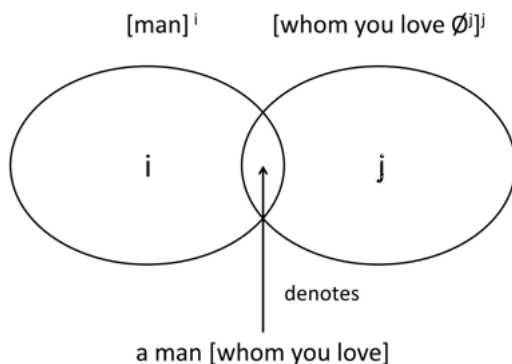
[*the man* [*whom* [*you love*  $\emptyset^i$ ]<sub>OBJ.NMLZ</sub>]<sub>ON'</sub>]<sub>NP</sub>  
 OBJ.NMLZR

The above analysis embodies the idea that nouns have a denotation index in the manner of [dog]<sub>i</sub> that points to a set of concepts that they denote. Nominalizations

<sup>19</sup> Toba may use a non-role marking nominalization marker (see (50)).

as nominals share this property, as indicated above. In the case of argument nominalizations, these denotation indices bind a variable in the form of a zero argument, thereby indicating the grammatical role that the entity denoted by the nominalization structure stand for. In (55c) above, the nominalization denotes an entity that stands for the subject role, namely one who loves you. In (55d) the nominalization denotes an entity that stands for the object role, one whom you love.

Notice that in our analysis there is no role that so-called relative pronouns play with regard to the gap in the nominalization or with regard to the head noun. Compare (51) and (55d). This is a desired consequence of our analysis, which analyzes a restrictive relative clause construction as involving two independent nominals, each with its own denotations. Restricting the denotation of the head noun means specifying its subset by the denotation of the modifying argument nominalization. Thus, the only requirement for the modifying nominalization with respect to the head noun in an RC construction is that the former denote entities that intersect with those denoted by the head noun, as in Figure 3 below. Our analysis is highly compatible with the treatment of a restrictive relative clause construction in Formal Semantics, which would define the denotation of such a construction as the intersection of two sets of entities; e.g.  $\{x \mid x \text{ is a man}\} \cap \{x \mid \text{you love } x\}$  (“the intersection of the set of all  $x$  such that  $x$  is a man and the set of all  $x$  such that you love  $x$ ”), where  $x$ ’s are two independent variables.<sup>20</sup>



**Figure 3:** Denotation of restrictive relative clause

The term “relative clause” can now be understood as a label for the modification-use of argument nominalization. But such a label is misleading since it suggests that nominalizations are clauses. We next show that there is ample crosslinguistic evidence that nominalizations are not clauses.

<sup>20</sup> The Formal Semantic analysis would have a difficult time in deriving the second set for the modification involving event nominalizations without a gap (see section 3.1), which would not yield to an analysis calling for operator movement, as in the case of the generative analysis of *wh*-relatives in English.



## 4 Sentences, clauses and nominalization

An early recognition of the use of grammatical nominalizations as noun modifiers is found in the context of Japanese grammar in Yoshio Yamada's *Nihonbunpōron* (Theory of Japanese Grammar) published in 1908. More recently, Matisoff (1972) recognized a connection between nominalizations and relative clauses in the Tibeto-Burman language Lahu. He also mentions similar connections between nominalizations, relative clauses, and possessive constructions in Mandarin Chinese and Japanese (see section 5). Matisoff's observation has been followed by others specializing in Tibeto-Burman languages such as DeLancey (1986) and Noonan (1997), and more recently by DeLancey (2002) and Noonan (2008). Many other recent studies on nominalizations and relative clauses such as those contained in Yap, Grunow-Härsta, and Wrona (2011) and Comrie and Estrada-Fernández (2012) clearly recognize the use of nominalizations as relative clauses, but for some unclear reason and without any justification they continue to use the term "relative clause", (i) as if some structures identifiable as relative clauses exist apart from argument nominalizations but "in certain languages relativization is indistinct from nominalization" (Comrie and Thompson 2007: 379) or (ii) as if nominalizations somehow turn into clauses under modification-use. Yamada (1908: 1462) simply states that we may call a grammatical nominalization used for noun modification an "adnominal **clause**" without offering the reason for it.

### 4.1 Tense and nominalization

Without clear definitions of clauses and sentences (and nominalizations, for that matter!) on the part of those who believe that relative clauses (our grammatical argument nominalizations) are clauses, it is difficult to know the true rationale underlying their belief about the clausehood of RCs. However, one observation that has been made is that RCs in some languages may stand as sentences; hence RCs are sentences that have been made dependent clauses by embedding them.<sup>21</sup> Such a possibility arises when the predicate in an RC has a tensed verb or more broadly a finite verbal form associated with sentences. For example, Comrie and Horie (1995: 68) tell us that "[w]hat precedes the head noun [as in (56a) below, for example,] is a well-formed sentence in its own right," as can be seen from the fact that it can stand as a sentence, as in (56b).

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<sup>21</sup> Rice (1989: 25), in her otherwise excellent grammar, tells us that "[a] relative clause is a sentence that modifies a noun". Compare this with Nevis, Pesetsky, and Rodrigues's (2009: 366) characterization of event nominalizations: "a verb may merge with **a sentence**, as in *Mary thinks [that the world is round]*" and "... a noun can merge with **a sentence**, as it does in *(the) claim [that the world is round], ...*" (emphasis added).

## (56) Japanese

- a. [ $\emptyset_1$  *kinoo*  $\emptyset_2$  *katta*] *hon*  
           yesterday       bought book  
           ‘the book that (I) bought yesterday’
- b.  $\emptyset_1$  *kinoo*  $\emptyset_2$  *katta*.  
           ‘(I) bought (it) yesterday.’ (As an answer to the question “When did you buy the book?”)

Comrie and Horie are equating the gaps found in the RC in (56a) with the anaphoric gaps found in the sentence in (56b). This, however, is a mistake. Anaphoric gaps can be filled by full noun phrases, albeit perhaps redundantly, but one of the gaps in an RC/argument nominalization cannot. Compare (56) with (57) below:

- (57) a. [ $\emptyset_1$ /***boku*** *ga kinoo*  $\emptyset_2$ /***\*sono hon*** *o katta*] *hon*  
           ‘the book that I bought \*that book’
- b.  $\emptyset_1$ /***Boku*** *wa kinoo*  $\emptyset_2$ /***sono hon*** *o katta*.  
           ‘I bought that book yesterday.’

(57a) is as bad as its English translation with the full noun phrase in object position. In other words, the two gaps in the RC are different from the two gaps in the sentence. Object nominalizations must have an obligatory gap ( $\emptyset_2$ ) in object position in both English and Japanese, while the latter may contain an anaphoric gap in other positions.<sup>22</sup> English and Japanese clauses and sentences, on the other hand, have no such constraint. Argument nominalizations are thus different from clauses and sentences in both English and Japanese.<sup>23</sup>

A similar conclusion obtains with the Mayan language K’ichee’ spoken in Guatemala, whose argument nominalizations modifying a noun qua RCs contain a finite verb form and appear to be able to stand as sentences, as in (58b) below.

- (58) K’ichee’ (Larson & Norman 1979:357; the grammaticality judgement courtesy of Telma Can Pixabaj)
- a. *lee ixoq lee* [*x-Ø-u-ch’ay* *lee achih*]  
           the woman NMLZR ASP-3SG.ABS-3SG.ERG-hit the man  
           ‘the woman whom the man hit/the woman who hit the man’

<sup>22</sup> Japanese, as in some other languages, allow a resumptive pronoun in a position lower in the grammatical relation hierarchy.

<sup>23</sup> Comrie and Horie (1995) recognizes this difference in footnote 5 in page 75, but does not deal with this most crucial issue in comparing the structures of RCs/argument nominalizations and clauses/sentences. Other related papers by Comrie (1996 and 1998a,b) repeat similar views about Japanese and other languages without even mentioning this issue. See also the contribution by Matsumoto and Comrie in this volume.

- b. *x-Ø-u-ch'ay*                      *lee achih*  
 ASP-3SG.ABS-3SG.ERG-hit the man  
 'S/he hit the man/The man hit him/her.'

However, just like the case of Japanese above, nominalizations qua RCs are different from sentences. The latter can have a full array of arguments appearing as full noun phrases, while the former must contain a gap. Observe:

- (59) a. *lee ixoq*    *lee*    [*x-Ø-u-ch'ay*                      *\*lee ixoq/Ø*    *lee achih*]  
           the woman NMLZR ASP-3SG.ABS-3SG.ERG-hit the woman/Ø the man  
           'the woman whom the man hit \*the woman/Ø' or 'the woman who  
           \*the woman/Ø hit the man'
- b. *x-Ø-u-ch'ay*                      *lee ixoq*    *lee achih*  
           ASP-3SG.ABS-3SG.ERG-hit the woman the man  
           'The woman hit the man/the man hit the woman.'

The difference between argument nominalizations qua RCs and clauses/sentences seen here also obtains in those languages that may contain a pronoun instead of a gap in argument nominalizations/RCs. Thus, the pronoun in subject position of the Thai subject nominalization cannot be replaced by a full noun, as shown in (60b), which is just as bad as its English translation.

- (60) Thai
- a. *thəə mây khuan kin yaa*                      [*thii man mətʔaayúʔ*]  
       2SG not should eat medicine NMLZR 3SG expire  
       'You should not take the medicine which has expired.'
- b. *\*thəə mây khuan kin yaa*                      [*thii yaa mətʔaayúʔ*]  
       2SG not should eat medicine NMLZR medicine expire  
       '\*You should not take the medicine which the medicine has expired.'

Similar examples can be adduced from diverse languages whose argument nominalizations contain verbal forms similar to those occurring in sentences, with tense and other finite features or without any of them, as in isolating Asian languages like Thai above.

The reluctance to recognize these nominalizations as such is rooted in the fact that they may contain formal finite features such as tense, aspect, and person marking, characteristics of sentences as in the examples above. However, there is nothing that prevents nominalizations from having these features since the information they carry can be highly valuable in distinguishing the types of entities they denote. For example, *what*-nominalizations in English make a crucial difference in what they

denote depending on the tense information they contain; e.g. *what I was buying* vs. *what I am buying*; *John's purchasing of the house last year* vs. *John's purchasing of the house next year*). Indeed, in many languages nominalizing morphology itself may incorporate tense information, like Korean and some languages in South America, as shown in (61)–(63), or may allow a separate tense expression within nominalized structures, as in the Oceanic examples given in (64) below.<sup>24</sup>

## (61) Korean

- a. [cikum pap-ul mek-**nun**] kes  
 now meal-ACC eat-PRS.NMLZR PRT  
 'one who is eating a meal now'  
 (cf. [[cikum pap-ul mek-**nun**] ai] 'a child who is eating a meal now')
- b. [ecey pap-ul mek-**un**] kes  
 yesterday meal-ACC eat-PST.NMLZR PRT  
 'one who ate a meal yesterday'
- c. [pap-ul mek-**ul**] kes  
 meal-ACC eat-FUT.NMLZR PRT  
 'one who will eat a meal'

## (62) Hixkaryana (Derbyshire 1999: 48–49)

- a. Event/Action nominalizer-Past tense: *-thiri*  
*i-wanota-thiri komo*  
 3-sing-AC.NMLZR COLL  
 'their singing (in the past)'
- b. Nominalizer of the S (Protagonist of intransitive event)/O (Patientive protagonist of transitive event)-Past tense: *-saho*  
*i-manho-saho uro/omoro/moki*  
 IMPERS-dance-S.NMLZR 1/2/3PRO  
 'I (am)/you (are)/he (is) the one who danced.'

## (63) Imbabura Quechua (Cole 1982)

- a. [Marya Ø riku-*shka*<sup>25</sup>] runa  
 Maria see-PST.NMLZR man  
 'the man whom Maria saw'

<sup>24</sup> Cf. so-called present and past participles in English forms, *a breaking chair/a broken chair*.

<sup>25</sup> The Imbabura *-shka* corresponds to the object argument nominalizer/event nominalizer *-sqa*, and *-k* to the subject argument nominalizer *-q* in Bolivian Quechua. The connection between object argument nominalizer and past tense is seen elsewhere; e.g. Kashibo-Kakataibo (Zariquiey 2011).

b. [*Marya* Ø *riru-k*]                      *runa*  
 Maria        see-PRS.NMLZR man  
 ‘the man whom Maria sees’

c. [*Marya* Ø *riku-na*]                      *runa*  
 Maria        see-FUT.NMLZR man  
 ‘the man whom Maria will see’

(64) Xârâcùù (Oceanic; Moyse-Faurie 2016)

Ê    kê            pwî        [êê-mwata    **na**    rê        anyââ] (182)  
 3.SG eat.tubes banana NMLZR-grate PST POSS mommy  
 ‘He is eating bananas which have been chopped up by his mother.’

(65) Marquesan (Oceanic; Moyse-Faurie 2016)

[*Te*    **i**        *ite-tina*        *na*        *tunane*    *tata*        *eka*    *te*        *tihe*    *te*  
 SPEC PST see-NMLZR PAUC brother nearly reach SPEC come SPEC  
*kui*        *i*        *una*], *atahi* *kokoti* *na*        *tunane*    *te*        *ouoho* *no*        *Hina*. (182)  
 mother LOC top    then cut        PAUC brothers SPEC hair        POSS Hina  
 ‘When the brother saw that the mother had nearly reached the top, (then)  
 they cut Hina’s hair.’

Tense is intimately connected with a sentence because the latter asserts the truth of a predication made by a clause as obtaining at a specific time. Since nominalizations do not perform these functions they typically lack an expression of tense. On the other hand, tense indication one way or another adds some vital information about what is denoted by nominalizations. There is thus no need to assume that nominalizations cannot be marked for tense, and we should not uncritically assume that tense-marked structures are clauses or sentences.

## 4.2 Functional definitions of clauses, sentences, and nominalizations

Those who believe that argument nominalizations (RCs) and other types of grammatical nominalizations are clauses/sentences are victims of the formal orientation in linguistics that attempts to characterize the nature of grammatical constructions in terms of formal properties. As seen above, grammatical nominalizations (partially) share internal structures with clauses and sentences. But these structure-internal formal properties are like the skeletal structures that a roast turkey shares with a live turkey. Just as a roast turkey and a live turkey are functionally very different and are distinguished largely on functional grounds, grammatical constructions such as clauses, sentences, and nominalizations must similarly be functionally

defined and distinguished. Shibatani (2017) offers the functional descriptions of clauses, sentences, and nominalizations as below:

The structure [that [John recklessly shoots trespassers]] in an expression like [*That John recklessly shoots trespassers*] is well known denotes an abstract entity of fact, just as the noun *fact* denotes an abstract entity concept. It also has an important external syntactic property of heading a subject or object NP, a major hallmark of nominals. The reason why nominalizations behave syntactically like nouns is because they denote substantive concepts, albeit some may be abstract, like nouns. Clauses and sentences perform functions different from the entity-denoting function. Clauses complete a predication by ascribing verbal relational concepts to the referent of a subject nominal. The structure [John recklessly shoots trespassers] as a clause ascribes the verbal property of [recklessly shoot trespassers] to the referent of the subject [John]. Sentences, on the other hand, perform different kinds of speech acts, namely illocutionary acts, such as asserting that the predication made by a clause is true (declarative sentences), questioning whether or not the predication is true (yes-no questions), ordering (imperative sentences), etc. The structure [John recklessly shoots trespassers] is a sentence when it is used in making an assertion about the clausal predication, i.e. when the speaker, by uttering the phonetic content of the structure, performs the illocutionary act of declaring that the predication made in the clause is true. Notice that predication and assertion are two different types of speech acts, which can be clearly separated in yes-no questions. In asking “Does John recklessly shoot trespassers?”, the speaker makes a predication but he does not assert its truth; instead, he asks the hearer to either assert or negate the truth of this predication.

The structure [(that) [John recklessly shoots trespassers]] as a nominalization, on the other hand, bears a function different from the clausal or sentential use of this structure. Nominalization structures neither predicate nor assert. Instead, they presuppose propositions such as *John recklessly shoots trespassers* and *John shot something* (for the nominalization in *I saw [what John shot]*). How one arrives at these presuppositions from the nominalization structures is an interesting question. But grammatical nominalizations generally contain enough material, as in the examples given here, from which one can construct associated presuppositions.

Instead of the speech acts of predication and assertion (or some other illocutionary acts), nominalization structures have the function of denoting substantive concepts, as repeatedly noted above. Being nominal, nominalizations may head an NP and function as arguments of clauses and sentences. They do not stand alone like sentences in their capacity as nominal structures. However, nominalizations may become used as sentences when they perform speech acts, such as the expressive act of evincing the speaker’s psychological stance or attitude toward the state of affairs denoted (e.g. an expression of lamentation or surprise), just as a noun can be used as a sentence issuing a warning; e.g. *Fire!* Conversely, sentences/clauses do not function as NP arguments. The only case in which they function as argu-

ments is when used as a direct quotation; e.g. *John said/wrote/boasted, "I am the greatest of all!"* In this way, grammatical constructions – sublexical morphemes, words, as well as larger phrasal units – are defined in terms of their functions, not by their formal similarities to other structures, though these provide supporting evidence for treating alike structures bearing the same function.

Indeed, it is **the functional unity** that motivates us to treat all the structures in (26) through (50) as grammatical argument nominalizations in spite of the formal differences among them – some have nominalization markers, while others don't, some have finite verbal forms, but others don't, and whereas some have the role-marking nominalizers, others don't, etc. etc.

### 4.3 Evidence that nominalizations are not clauses or sentences

There are some compelling pieces of evidence pointing to the nominal nature of grammatical nominalizations that help them distinguish from clauses and sentences. Below we examine the two quintessentially nominal phenomena of plural and classifier marking.

#### 4.3.1 Plural marking

Languages that have plural marking on nouns may mark grammatical argument nominalizations similarly since both may denote countable entities. Observe the following Bolivian Quechua forms.

(66) a. *wasi* 'house' : *wasi-kuna* 'houses'; *llank'a-q* 'worker' : *llank'a-q-kuna* 'workers'

b. [*wallpa-ta wayk'u-q-kuna*  
chicken-ACC cook-SUB.NMLZR-PL  
'ones who are cooking a chicken']

c. [[*wallpa-ta wayk'u-q*]<sub>NMLZ</sub>-*kuna*] *warmi-kuna*]<sub>NP</sub>  
chicken-ACC cook-SUB.NMLZR-PL woman-PL  
'women who are cooking a chicken']

(66b) and (66c) show that the subject grammatical nominalization involved plays a denoting function, just like a simple noun *wasi* 'house' in (66a), rather than the predication or the assertion function of a clause and a declarative sentence. Notice, however, that a Quechua sentence, as in some other languages, may contain a verb marking plurality of an NP referent within a sentence, as in the following sentence.

- (67) *Waki-n runa humu-n-ku.*  
 some-3 man come-3-PL  
 ‘Some of the men come.’

Crucially, the plural morpheme marking verbs differs from those marking nominals, although there is an obvious similarity in form.

Similar plural marking of grammatical nominalizations is seen in a fair number of languages, as the following data show.

- (68) Capanawa (Panoan; Peru; Loos 1999)

[ʔoá tsaʔot-ai]<sub>NMLZ</sub> -**bo** his-i (236)

there sit-PRS -PL see-IMER

‘Look at those (who are) sitting over there.’

Cf. [ʔani hiwi mebi taʂpat-ai]<sub>NMLZ</sub> teʂpan anin ʔiso honiti (236)

big tree branch bifurcate-PRS form LOC monkey hide-PRS

‘A monkey is hiding in the form of a branch that bifurcates from a large tree.’

- (69) Nheengatu (Tupí-Guaraní; Brazil; Cruz 2011 and p.c.)

a. *re-su re-mu-tawari kau [re-yu-mu-kuaku*  
 2SG.A-go 2SG.A-CAUS-tobacco DEM 2SG.A-R/R-CAUS-be.fasting

*wa]=ita u-mbau arã*

NMLZ=PL 3SG.A-eat PROS

‘You are going to bless those whom you made fast.’

b. *Ai-te paa nhaã pedasu itá=ita [maxi posu upe wa]=ita*  
 3SG=FOC REP DEM piece stone=PL leper well LOC NMLZ=PL

‘(They say that) he becomes those stones that are in the well of lepers.’

- (70) Yaqui (Alvarez 2012 and p.c.)

a. [*in jinu-ka-’u*]-**m** sikili

1SG.GEN buy-PERF-NMLZ-PL red

‘Ones I bought are red.’

b. *U-me bisikleeta-m [in jinu-ka-’u]-m sikili*

DET-PL bicycle-PL 1SG.GEN buy-PERF-NMLZ-PL red

‘The bicycles that I bought are red.’

- (71) Salve (Rice 1989)

[*nɨwá kedaw’i*] i **ke** gogháyeyida (83)

long 3PL.sat NMLZR PL 1SG.saw.3PL

‘I met ones who stayed a long time.’ (Hare dialect)



Turkish also allows plural marking on grammatical argument nominalizations but does not permit doubling of plural marking on both the head noun and the modifying nominalization, as in (72c) below.

(72) Turkish (Altaic; Göksel and Kerslake 2005: 449 and Yu Kuribayashi p.c.)

- a. [*Opera-yı sev-me-yen*]<sub>NMLZ</sub> **ler-e** şaşıyorum.  
Opera-ACC like-NEG-NMLZR-PL-DAT surprised.1SG  
'I am surprised at those who don't like opera.'
- b. [[*Opera-yı sev-me-yen*]<sub>NMLZ</sub> *kişi-ler*]-e şaşıyorum.  
Opera-ACC like-NEG-NMLZR person-PL-DAT surprised.1SG  
'I am surprised at those people who don't like opera.'
- c. \*[[*Opera-yı sev-me-yen*]<sub>NMLZ</sub> **ler**] *kişi-ler*]-e şaşıyorum.  
Opera-ACC like-NEG-NMLZR-PL person-PL surprised.1SG  
'I am surprised at those people who don't like opera.'

Tapiete grammatical argument nominalizations, in addition to plural marking, show another nominal feature, foreign to clauses and sentences, namely, diminutive marking, as below.

(73) Tapiete (González 2005 and Coccine 2008)

- a. *o-che-wa-reta*  
3AC-sleep-NMLZR-PL  
'(the ones) who are sleeping'
- b. *karai-re* [tumpa i-ñe'ë mbe'u i-a-reta]  
white.man-PL god 3.POSS-language tell be-NMZR-PL  
'the gringos (white men) who were announcing (predicating) the Bible'
- c. *hau-wa-mi*  
1:eat-NMLZR-DIM  
'what little I eat'
- d. *ko ñ-a'engu-mba-mi*  
DEM 3IN-be.deaf-NEG.NMLZR-DIM  
'this (one) who is not a little deaf'

Finally, Piapoco, spoken in the eastern plains of Colombia, has a nominalizer that combines number and gender information, as below, where gender ( $\pm M$ ) is indicated only in singular forms.

(74) Piapoco (Arawak; Colombia; Klumpp and Burquest 1983)

- a. *yà-a-wa* [i-té-**eyéi**-ca *yà-ana*] (395)  
 3M-go-ASP 3M-carry-[+pl]-ASP 3M-limb  
 ‘(The ones) who carry the animal’s leg go.’
- b. *ábiba asieli* [*yà-amè-eri* *sísade* *Cadá néese*] (390)  
 other man 3M-arrive-[+M/-pl] from.there Cada from  
 ‘the other man who arrived from Cada’

#### 4.3.2 Classifier marking

The Piapoco data bring us to the next nominal feature that reflects the entity-denoting property of nominalizations, namely classifiers. Japanese numeral classifiers, mostly Chinese loans, occur in several syntactic positions. Two common patterns are shown below, where the numeral classifier *san-satu* [three-CLF.BOUND] ‘three bound (thing)’ occurs prenominally (75a) and as an adverb away from the modified noun (75b).

- (75) a. *Ken wa san-satu no hon o kinoo motte kita.*  
 Ken TOP three-CLF GEN book ACC yesterday carry.GER came  
 ‘Ken brought three books yesterday.’
- b. *Ken wa hon o kinoo san-satu motte kita.*  
 Ken TOP book ACC yesterday three-CLF carry.GER came  
 ‘Ken brought three books yesterday.’

Grammatical nominalizations in Japanese do not seem to readily allow prenominal numeral classifiers, but they can be quantified by adverb numeral classifiers, indicating that grammatical nominalizations denote entities rather than predicate or assert like clauses and sentences.

- (76) a. \**Boku wa [san-satu no [Ken ga motte kita]<sub>NMLZ</sub>*  
 I TOP three-CLF GEN Ken NOM carry.GER came  
*no o kinoo yonda.*  
 PRT ACC yesterday read  
 Lit. ‘I read yesterday three what John brought.’
- b. *Boku wa [Ken ga motte kita]<sub>NMLZ</sub> no o kinoo*  
 I TOP Ken NOM carry.GER came PRT ACC yesterday  
*san-satu yonda.*  
 three-CLF read  
 ‘I read yesterday three of what Ken brought.’

It is interesting to notice that the adverbial quantifier in (76b) has the partitive interpretation of reading three of what Ken brought, rather than quantifying what is denoted by the grammatical nominalization. But the point is that the choice of an adverbial quantifier is determined by the denotation of the grammatical nominalization, as the comparison between (76b) and the following clearly shows.

- (77) *Boku wa [Ken ga motte kita]<sub>NMLZ</sub> no o kinoo*  
 I TOP Ken NOM carry.GER came PRT ACC yesterday  
*san-bon nonda.*  
 three-CLF drank  
 'I drank yesterday three (bottles) of what Ken brought.'

The choice of adverbial classifiers indicates different types of things that Ken brought. The use of *satu* in (76b) indicates that what Ken brought were books or book-like bound materials, while the use of *hon/bon* in (77) indicates that what Ken brought were contained in cylindrical containers such as bottles.

Interestingly Chinese allows the pattern in (76a) disfavored in Japanese. Observe:

- (78) Mandarin Chinese  
 a. *sān-běn shū*      b. *sān-zhī niǎo*  
    three-CLF book      three-CLF bird  
    'three books'      'three birds'  
 c. *Sān-běn [wǒ mǎi-de]<sub>NMLZ</sub> hěn guì.*  
    three-CLF I buy-NMLZR very expensive  
    Lit. 'three what [books] I bought were very expensive.'  
    Cf. *[wǒ mǎi-de]<sub>NMLZ</sub> shū*  
        I buy-NMLZR book  
        'book that I bought'  
 d. *sān-zhī [wǒ mǎi-de]<sub>NMLZ</sub>*  
    three-CLF I buy-NMLZR  
    Lit. 'three what [animals] I bought'

(78c) and (78d) show that the grammatical nominalizations *wǒ mǎi-de* 'what I bought' may denote a variety of things evoked by this structure, and depending on what they actually denote, different classifiers are chosen in quantifying the denoted objects, such as books or book-like materials as in (78c) and animals as in (78d).

That grammatical nominalizations denote, rather than predicate or assert like clauses and sentences, is also clearly seen from the use of classifiers in Thai, which allows optional classifier marking of grammatical argument nominalizations. Observe.

## (79) Thai (courtesy of Kingkarn Thepkanjana)

- a. *khruu [lǎaj khon]* b. *mǎa [sǐi tua]*  
 teacher many CLF.PERSON dog four CLF.BODY  
 ‘many teachers’
- c. (*chǎn chǎp*) [*thīi khwěe nay tūu*]<sub>NMLZ</sub>NP (Answer to the question  
 I like NMLZR hang in closet “Which skirt do you like?”)  
 ‘(I like) the one hanging in the closet.’
- c’. (*chǎn chǎp*) [*tua thīi khwěe nay tūu*]<sub>NMLZ</sub>NP  
 I like CLF NMLZR hang in closet  
 ‘(I like) the one hanging in the closet.’
- d. (*chǎn chǎp*) [*kràproon tua thīi khwěe nay tūu*]<sub>NMLZ</sub>NP  
 I like skirt CLF NMLZR hang in closet  
 ‘(I like ) the one hanging in the closet.’
- e. \**Tua [kràproon khwěe nay tūu]*  
 CLF skirt hang in closet  
 ‘A skirt hangs in the closet.’

Notice that a clause/sentence is never marked by a classifier, as indicated by the ungrammatical sentence in (79e).

In the Tibeto-Burman language Newar spoken in Nepal, classifiers have given rise to nominalizers, which distinguish animate and inanimate grammatical argument nominalizations depending on the nature of their denotation. Notice that, while the animate nominalizer is identical in form to the animate classifier, the inanimate nominalizer has a short vowel distinguishing it from the classifier counterpart, which has a long vowel. Observe.

(80) Newar animate classifier and nominalizer -*mha*

- a. *ni-mha masta*  
 two-CLF.ANIM child  
 ‘two children’
- b. [*ana dan-ā cwā: =mha*] *rām=yā(=mha<sup>26</sup>) macā kha:*  
 there stand-CM exist.ND=NMLZR Ram=GEN(=NMLZ) child COP  
 ‘The one standing there is Ram’s child.’  
 (CM=concatenated form, ND=neutral disjunct)
- c. [[*ana dan-ā cwā: =mha*]<sub>NMLZ</sub> *macā*]<sub>NP</sub> *rām=yā=mha kha:*  
 there stand-CM exist.ND=NMLZR child Ram=GEN=NMLZR COP  
 ‘The child standing over there is Ram’s.’

<sup>26</sup> The use of the nominalizer here will be discussed in the next section.

(81) Newar inanimate classifier *-gu*: and inanimate nominalizer *-gu*

- a. *nī-gu: saphu:*  
two-CLF book  
'two books'
- b. *[[ana du=**gu**]<sub>NMLZ</sub>]<sub>NP</sub> rām=yā(=gu) gāri kha:.*  
there exist.ND=NMLZR Ram=GEN(=NMLZR) car COP  
'The one that is there is Ram's car.'
- c. *[[ana du=**gu**]<sub>NMLZ</sub> gāri]<sub>NP</sub> rām=yā=gu kha:.*  
there exist.ND=NMLZR car Ram=GEN=NMLZR COP  
'The car that is there is Ram's.'

A similar development, where classifiers bear the nominalizing function, is clearly seen in Cantonese, where grammatical nominalizations may be marked by classifiers, the choice of which depends on what they denote. Observe.

## (82) Cantonese (Matthews and Yip 1994)

- a. *[nī dī] yú*      b. *[sām go] hohksāang*  
this CLF fish      three CLF student  
'this fish'      'three students'
- b. *[[[Ngóhdeih hái Faatgwok sihk] dī]<sub>NMLZ</sub> yéh]<sub>NP</sub> géi hóu-sihk ga.*  
we      in France eat CLF food quite good-eat PRT  
'The food that we ate in France was pretty good.'
- c. *[[Gaaú léih tàahn kàhm] gó] go?*  
teach you play piano that CLF  
'The one who teaches you (to play the) piano?'

Asia is not the only area in which nominalizing classifiers occur. The Amazon Basin is another area where classifiers play important grammatical roles, including use of them as numeral classifiers and for marking grammatical nominalizations, again underscoring the point that grammatical nominalizations denote entities, rather than predicate or assert, which can be classified according to their nature. Observe the following data from Bora, where the classifier *hà* marks an argument nominalization denoting an object like a shelter or with a sheltering function and *kpà* a slab-like object.

## (83) Bora (Witotoan; Colombia, Peru, Brazil; Thiesen and Weber 2012)

- a. *ó-α<sup>x</sup>t<sup>h</sup>ùmi-<sup>2</sup> [a<sup>s</sup>t-βiè]-hà* (382)  
I see-<t>      burn-sIn-<shelter>  
'I saw a house that was burning.' Lit. 'I saw one (shelter-like) that was burning.' (<t> = verb-terminating classifier; sIn = single action)

- b.  $\partial-k^h\tilde{e}$      $t-\partial:k^h\tilde{u}$      $[\tilde{e}:-kp\partial$      $[\tilde{e}:-h\acute{a} \text{ tʃl}^L:j\tilde{n}\acute{e} \text{ } \acute{t}^x \text{ } k^h\tilde{a}]-kp\partial]\beta\tilde{u}$  (388)  
 1-Obj.An you.IMP-give that-<slab> that-<shelter> below be-<slab>-thm  
 ‘Give me the plank that is under the house.’ Lit. ‘Give me the (slab-like)  
 one(-slab-like thing) which is under the (shelter-like).’  
 (OBJ.An = animate object; IMP=imperative; -thm=theme (grammatical  
 relation))

Like grammatical nominalizations in other languages, these nominalizations marked by classifiers also have modification-use. First observe (84a) below, in which a gender-based classifier marks argument nominalizations, a phenomenon very common among Amazonian languages. Argument nominalizations like this can modify a head noun, as in (84b).

- (84) a.  $[\emptyset \text{ } h\acute{o}a\acute{a}-k^h\tilde{e} \text{ } u^skp\acute{a}:p\partial]-:p\tilde{e} \text{ } ts^h\acute{a}:-\tilde{?i}$  (379-380)  
 John-objAn teach-<SG.MSC> came-<t>  
 ‘(The one-MSC) who taught John came.’  
 b.  $\acute{o} \text{ } \acute{a}^xt^h\tilde{u}mi-\tilde{?} \text{ } [\partial:\tilde{?i}:-pi\tilde{e}]-kh\tilde{e} \text{ } [\emptyset \text{ } \partial-k^h\tilde{e} \text{ } i^s\tilde{?}t\acute{o}]-:p\tilde{e}-kh\tilde{e}$  (381)  
 I see-<t> dog-<SG.MSC> I-objAn bite-<SG.MSC>-objAn  
 ‘I see the dog that bit me.’ (objAn = animate object)

The Bora patterns above may seem quite exotic, but, as a matter of fact, the gender-based classifier system is widespread among Indo-European languages, and several languages incorporate it in their nominalization markers as Bora does. German distinguishes three gender classes of masculine, feminine, and neuter, and, like regular nouns, grammatical argument nominalizations are distinguished according to these classes depending on what they denote. Observe:

(85) German

- a. *Ich kenne den*                      [*der*                      [ $\emptyset$  *morgen*    *kommt*]].  
 I    know ART.MSC.ACC MSC.SUB.NMLZR    tomorrow comes  
 ‘I know the one (MSC) who comes tomorrow.’  
 b. *Ich kenne die*                      [*die*                      [ $\emptyset$  *morgen*    *kommt*]].  
 I    know ART.FEM.ACC FEM.SUB.NMLZR    tomorrow comes  
 ‘I know the one (FEM) who comes tomorrow.’  
 c. *Ich kenne das*                      [*das*                      [ $\emptyset$  *morgen*    *kommt*]].  
 I    know ART.FEM.ACC FEM.SUB.NMLZR    tomorrow comes  
 ‘I know the one (NEUT) who comes tomorrow.’

The German nominalizers clearly combine information about the gender class and about the grammatical relation that the denoted entities are identified with (see the earlier examples in (24)). In fact, German has a double marking system, where not only the nominalizations themselves but also the articles marking them indicate the gender class of the entity denoted by the nominalization in question, as observed in the articles marking nominalizations in (85). In some languages, classificatory articles of the German type are the only clue to the nature of the entities denoted by grammatical argument nominalizations.

In Toba, all nominals in NP-use are marked by what Messineo (2003) calls nominal classifiers (*clasificadores nominales*)<sup>27</sup>, which encode configurational and deictic, as well as number and gender information regarding the denotation of the following nominal, as below.

(86) Toba (see Messineo (2003: 145) for details)

- a. **na**                      *pioq*  
     DD.                    dog  
     PROXIMAL  
     ‘this dog’
- b. **yi-wa**                *pioq*  
     DD.-PAUC           dog  
     HORIZONTAL  
     EXTENDED  
     ‘two or three dogs lying down’
- c. **a-da-wa**              *?alo-l*  
     FEM-DD. -PAUC   woman-PAUC  
     VERTICAL  
     ‘two or three women standing’

Just like the German articles mentioned above, these demonstrative determiners indicate the nature of the entity denoted by grammatical nominalizations, as seen below.

(87) Toba (courtesy of Cristina Messineo)

- a. *s-ac?ek* **a-so**            [(ntonigifi) [ʔaw-ʔot Ø fikajt]<sub>NMLZ</sub>]<sub>NP</sub>  
     1A-eat   FEM- DD. (tortilla)   2A-make   yesterday  
                  DISTAL

‘I ate what you made yesterday.’ ‘I ate the tortilla that you made yesterday.’

<sup>27</sup> Cristina Messineo (p.c.) now would call these as demonstrative determiners (DDs) and demonstratives (DEMs). I gloss the examples with this new terminology.

- b. [**a-na-wa** [Ø *chigoqchigina yi Espinillo*]<sub>NMLZ</sub>]<sub>NP</sub> *tayge da Salta ko'ollaGa*  
 FEM- DD.-PL 3.come.from DD Espinillo 3.go DD Salta PST  
 PROXIMAL  
 ‘Those (FEM) who came from the Espinillo went to Salta.’

These demonstrative determiners (DDs) (and the demonstratives not discussed here) show two things. Syntactically, grammatical nominalizations are nominal and they are marked by either a demonstrative determiner (or a demonstrative) in their NP-use, just like any ordinary nouns. Semantically, grammatical nominalizations, especially argument nominalizations, denote concrete entities, whose physical properties including number and gender are marked by DDs (or demonstratives), again just like any ordinary nouns. These facts would not be easily explained if grammatical nominalizations were clauses and sentences that do not denote substantives. Notice, also, that grammatical nominalizations are perfectly compatible with finite verb forms in Toba also.

We conclude this section by pointing out that English grammatical argument nominalizations also classify their denotations in terms of the human/non-human distinction similar to the animate/inanimate distinction that Newar nominalizers mark. The case in point is the distinction between *who(m)* and *which*, the former marking a human denotation by an argument nominalization and the latter a non-human denotation. Observe:

- (88) a. *You may choose* [[**who** [*you like* Ø]]<sub>NMLZ</sub>]<sub>NP</sub>.  
 b. *You may choose* [[**which** [*you want* Ø]]<sub>NMLZ</sub>]<sub>NP</sub>.

This again shows that what we consider to be grammatical nominalizations are denoting rather than predicating or asserting like clauses and sentences.

## 5 Nominal-based nominalizations

Perhaps the most innovative proposal made in Shibatani's work on nominalization is to reanalyze the genitive or possessive construction as a nominal-based nominalization. There are several motivations for this radical departure from the traditional analysis. First of all, what forms like *his* and *John's* denote are those things with which the person referred to is intimately connected, as in the case of ordinary metonymic expressions, such as things that are possessed permanently or temporarily or things to which the person is connected as an author or a theme (as in the case of the theme of a photo).



Secondly, the precise references of the “possessive” forms are determined by context, again as in the case of ordinary metonymic expressions and verbal-based grammatical nominalizations discussed above. Observe:

(89) A: *Which car do you like?*

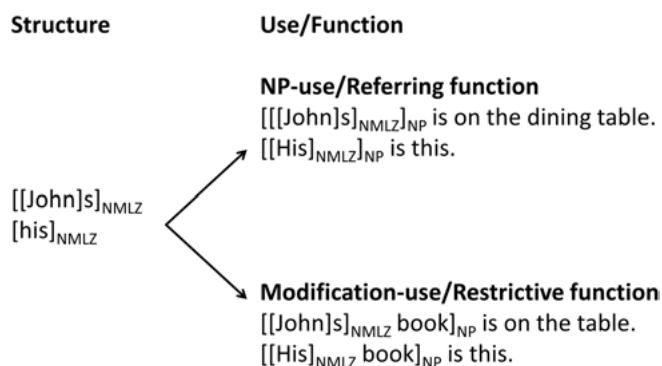
B: *I prefer **John’s** over **Bill’s**.*

(90) A: *Is this the book that Bill brought?*

B: *No, that’s **John’s**. I saw **Bill’s** on the dining table.*

By Grice’s Cooperative Principle, we would interpret *John’s* and *Bill’s* in (89) to be referring to the cars intimately connected with the referents of *John* and *Bill*, while in (90) *John’s* and *Bill’s* would be likely understood to be referring to the books belonging to the referents of *John* and *Bill*.

The relevant forms above all represent NP-use of N-based nominalizations. These, like V-based grammatical nominalizations studied above, also have modification-use, as shown below.



**Figure 4:** Two uses of N-based nominalization

The newly proposed nominalization analysis does away with the genitive case altogether as well as the parts of speech of “possessive pronouns” and “possessive adjectives” recognized in traditional grammar. The former (*his*, *mine*, etc.) are no more than instances of the NP-use and the latter (*his*, *my*, etc.) those of the modification-use of N-based nominalizations. Traditional grammar makes the same mistake as those who recognize relative clauses apart from the modification-use of grammatical argument nominalizations.

Besides the logical consistency between the analysis of N-based nominalizations outlined above and that of V-based nominalizations, Shibatani (2017) offers morphological evidence unifying these two types of grammatical nominalization. The NP-

use of V-based nominalizations in Modern Japanese requires *no*-marking very much similar to the *one*-marking found in Modern English. Compare the forms of the two uses of V-based nominalizations in the Japanese forms and their English translations below.

(91) Japanese

- a. [[*suki na*]<sub>NMLZ</sub> **no**]<sub>NP</sub> *to kekkon sinasai.*  
     like COP PRT with marriage do.IMP  
     ‘Marry **one** [who [you like]]<sub>NMLZ</sub>]<sub>NP</sub>
- b. [[*suki na*]<sub>NMLZ</sub> *hito*]<sub>NP</sub> *to kekkon sinasai.*  
     like COP person with marriage do.IMP  
     ‘Marry [a man [who [you like]]]<sub>NMLZ</sub>]<sub>NP</sub>

Shibatani traces the *no*-marker above to the Classical Japanese *no* that marks the NP-use of the N-based nominalization (or the genitive form), as seen in an example like the one below.

- (92) *Hitozuma to [wa ga*<sup>28</sup>*] no hutatu omouni hanarekosi*  
     man’s.wife and I GEN PRT two think leave.behind  
     *sode wa awaremasereru.*  
     sleeve TOP exceedingly.sad  
     ‘As I think about both a man’s wife and **mine**, the sleeves left behind are exceedingly sad.’

The extension of the *no*-marking from the NP-use of N-based nominalization (aka the genitive/possessive), as in (92) above to that of the V-based nominalization, as in (91a) started in the early 17th century. Shibatani’s point is that this extension of the *no*-marking from one domain to another indicates that the two domains are recognized as a unified phenomenon.

Crosslinguistic investigations reveal a large number of cases where both N-based nominalizations and V-based nominalizations take the same morphological marking. There are two patterns of marking here. One is the Japanese pattern, where only the NP-use of both N-based and V-based nominalizations are marked same, and the other, perhaps more compelling pattern is where both N-based and V-based nominalizations involve identical markings in both NP- and modification-use.

The Korean use of the particle *kes* is similar to the Japanese *no*-marking, where only NP-uses of N-based and V-based nominalizations are marked identically, as below.

<sup>28</sup> Classical Japanese had two genitive particles (our nominalizers for nouns), *no* and *ga*. The *no* particle that marks the NP-use of grammatical nominalization is related to the nominalizer/genitive *no*. In some other dialects, *ga* is used as the marker of the NP-use of grammatical nominalizations.

## (93) Korean

## a. NP-use of V-based nominalization

*Na-nun* [[[*apeci-ka cwu-n*]<sub>NMLZ</sub> **kes**]<sub>NMLZ</sub>]<sub>NP</sub>-*ul ilk-ko-iss-ta*.  
 I-TOP father-NOM give-NMLZR-PRT-ACC read-GER-be-IND  
 ‘I am reading what father gave (me).’

## a’. NP-use of N-based nominalization

[[[*emeni-uy*]<sub>NMLZ</sub> **kes**]<sub>NMLZ</sub>]<sub>NP</sub>-*un ku chaek i-ta*.  
 mother-NMLZR-PRT-TOP that book COP=IND  
 ‘Mother’s is that book.’

## b. Modification-use of V-based nominalization

[[*apeci-ka cwu-n*]<sub>NMLZ</sub> *chaek*]<sub>NP</sub>  
 father-NOM give-NMLZR book  
 ‘the book that father gave (me)’

## b’. Modification-use of N-based nominalization

[[*emeni-uy*]<sub>NMLZ</sub> *chaek*]<sub>NP</sub>  
 mother-NMLZR book  
 ‘mother’s book’

Notice that the nominalizers themselves are different for the V-based (*-n*) and N-based (*-uy*) nominalization, yet the results of these processes are treated alike in their NP-use, as seen in (93a) and (93a’).

Many languages of the world (e.g. Japanese dialects, Ryukyuan, Telugu and other Dravidian languages,) show a similar marking pattern for the NP-use of both N-based and V-based grammatical nominalization. While the ultimate origins of the particle *no* and Korean *kes* cannot be known<sup>29</sup>, many languages recruit as markers of NP-use of nominalizations a noun meaning “thing”, as closely documented in a variety of Ryukyuan languages by Shibatani and Shigeno (2013). The Kwa language Gã of Ghana uses *n̄́*, deriving from a noun meaning “thing”, and *m̄́*, which means “person” as a noun, as markers of NP-use of nominalizations – the former when a non-human is denoted and the latter for a human denotation. While in Gã the origins of these markers are transparent, Campbell (2017 Chap 6) presents strong evidence that they are grammaticalized and do not mean “thing” or “person” when they occur with the NP-use of nominalizations. For example, e.g., *n̄́* as a noun takes a definite article but *n̄́* as a marker of NP-use never does, and *n̄́*, meaning inanimate “thing” as a noun, can mark human and animate referents in the NP-use of N-based nominalizations, which looks like an innovation among a smaller group of speakers.

<sup>29</sup> Many Korean scholars think that *kes* was originally a noun with the meaning of “thing”, but there is no evidence for it. The “thing” reading they associate with *kes* actually comes from the nominal denotation of the nominalizations they mark. Like Japanese, Middle Korean did not have the *kes* marking, yet those nominalizations without *kes* have exactly the same “thing” reading as their modern counterparts with *kes*.

- (94) Gã (Kwa; Campbell 2017)
- a. NP-use of V-based nominalization  
 [nĩ [nĩ ĭ=súmǎǎǎ]] jĩ ànĩháó (550)  
 NM NMLZR 1SG=like.NEG COP laziness  
 ‘What I don’t like is laziness.’ (NM=marker of NP-use of nominalization)
- a’. NP-use of N-based nominalization  
 shĩ [[Ellen] nǎ]=lǎ [Pàpá Tèi nǎ]=lǎ lǎ=lǎ  
 but Ellen NM=TOP Papa Tei NM=TOP 3SG.OBJ=TOP  
 ĭ=nyǎǎǎ má-!yá (557)  
 1SG-able.NEG 1SG.FUT-go  
 ‘But as for Ellen’s and Papa Tei’s I couldn’t attend them.’
- b. Modification-use of V-based nominalization  
 [àtálé [nĩ àmǎ=sùmǎ]] (538)  
 dress NMLZR 3PL=like  
 ‘the dress that they like’
- b’. [[Elma] bĩ]<sup>30</sup> jí lǎ (111)  
 Elma child COP 3SG.OBJ  
 ‘She’s Elma’s child.’

The recruiting of nouns meaning “thing” is also seen in the Panoan language Kashibo-Kakataibo (Zariqueiv 2011).

The other case, where **nominalizers** (not makers of NP-use as above) for both V-based and N-based nominalizations are the same, is also fairly widespread. First observe the following Mandarin Chinese pattern.

- (95) Mandarin Chinese
- a. NP-use of V-based nominalization
- Nǐ méi yǒu* [[wǒ xǐhuān Ø] =**de**]<sub>NMLZ</sub><sub>NP</sub>
- you not have I like =NMLZR
- ‘You don’t have what I like.’
- a’. NP-use of N-based nominalization
- Zhèi běn shū shì* [[[wǒ]=**de**]<sub>NMLZ</sub>]<sub>NP</sub>
- this CLF book COP I=NMLZR
- ‘This book is mine.’

**30** Notice that Gã, as in many languages, does not have an overt nominalization marker for N-based nominalizations.

## b. Modification-use of V-based nominalization

[[wǒ xǐhuān Ø] =**de**]<sub>NMLZ</sub> yī fu]<sub>NP</sub>  
 I like =NMLZR clothes  
 ‘the clothes that I like’

## b'. Modification-use of N-based nominalization

[[wǒ] =**de**]<sub>NMLZ</sub> shū]<sub>NP</sub>  
 I =NMLZR book  
 ‘my book’

Notice that the particle *de* occurs in both NP- and modification-use, and therefore it is a nominalizer rather than a marker of NP-use. While event nominalizations in Chinese have no associated nominalizer, V-based argument nominalizations and N-based nominalizations are both marked by *de*.

While this pattern had been noticed by many, including Matisoff (1972), there has been no answer as to why we see the same marking pattern for both V-based and N-based expressions. Li and Thompson (1981) recognize two different *de*, one for nominalizing verbs (p. 575) and the other termed “Associative” *de* (p. 113) for N-based expressions. Sposato (2012), in his description of relative clauses of the Miao language Xong, opts for Li and Thompson’s term Associative in describing one type of V-based argument nominalization and N-based nominalizations, both marked by what appear to be interchangeable markers *naond* and *nangd*, leaving unanswered the question why relative clauses and possessive constructions are marked same.<sup>31</sup>

(96) Xong (Miao-Yao (Homong-Mien); southern China; Sposato 2012)

## a. [Wud jangs nangd] nis ndut-lid ndut-ghueax. (58)

3SG plant ASSOC COP tree-plum tree-peach  
 ‘What he planted were plum trees and peach trees.’

## b. [Wel hauk naond] jud jix raut. (57)

1SG drink ASSOC alcohol NEG good  
 ‘The alcohol that I’m drinking is no good.’

## c. Ob-naind nis [wel naond]. (59)

NOM-this COP 1SG ASSOC  
 ‘This is mine.’ (NOM= nominalizing prefix or general nominal prefix)

## d. [dab-guoud naond] zhoux.mioux (59)

AN-dog ASSOC ear  
 ‘the dog’s ear’ (AN=animal prefix)

<sup>31</sup> Sposato recognizes other functions these markers play such as marking adverbs and functioning as a sentence final emphatic marker. The development of nominalizers into these functions is not at all rare (see Yap and Grunow-Härsta (2010)).

What prevented these scholars from entertaining the possibility of N-based nominalizations is likely the widespread belief in the field that nominalization applies only to verbs.<sup>32</sup> This belief is certainly groundless as even the simple case of nominalization by the English “agentive” suffix *-er*, found in V-based forms like *singer*, *reader*, applies to nominals – *villager*, *left-fielder*, *three-master*, *tenner*, *49ers*, etc. etc. English is not alone here. Parkatêjê, a Je language in northern Brazil, has the agentive suffix *-katê*, which nominalizes verb roots (e.g. *krere* ‘sing’ > *krere-katê* ‘singer’; *jakre* ‘write’ > *jakre-katê* ‘writer’). But this suffix productively applies to animal names as well, producing forms like *pryre* ‘animal’ > *pryre-katê* ‘(animal) hunter’, *rop* ‘jaguar’ > *rop-katê* ‘jaguar hunter’, and *kukryt* ‘tapir’ > *kukryt-katê* ‘tapir hunter’. Yagua in northeast Amazonia has nominalizing classifiers that apply not only to verbal roots but also to adjectival as well as nominal roots (e.g. *tiryôḡ-jay* (sleep-CLF.PELT) ‘sleeping mat’, *jqamu-daisy* (big-CLF.THIN.POLE) ‘big blowgun, pole’, *nqonoo-jq̣̣* (light-CLF.LIQUID) ‘kerosene’) (Payne 1985). The Salish language Halkomelem has similar nominalizing classifiers that also apply to verbal, adjectival, and nominal roots (e.g. *ʔitət=eʷwtxʷ* (sleep=CLF.HOUSE) ‘hotel, bedroom’, *q̣aqʷiy=eʷwtxʷ* (sick=CLF.HOUSE) ‘hospital’, *tel=eʷwtxʷ* (money=CLF.HOUSE) ‘bank’). (Gerdtts and Hinkson 2004). Mandarin Chinese has several “agentive” formatives that derive nouns from verbs (*jì-zhě* [to record-AGT] ‘reporter’ *zuò-zhě* [to make-AGT] ‘author’), but they also apply to nouns (*bǐ-zhě* [pen-AGT] ‘author’, *dìguó zhǔyì-zhě* [imperialism-AGT] ‘imperialist’).

A wide range of Tibeto-Burman languages (e.g. Lahu, Burmese) show a pattern similar to the Chinese (Sinitic) and Xong (Miao-Yao) pattern above, marking both V-based argument nominalizations and N-based nominalizations the same way. Turning to languages outside these language families, first observe the comparable marking pattern in the Niger-Congo language Yoruba in West Africa.

(97) Yoruba (Ajiboye 2005)

a. V-based nominalization

*Mo ri eyi [tí Kúnlé nì]*

I see this NMLZR Kunle own

‘I saw the one that Kunle owns

Cf. *[èrè [tí Kúnlé nì]]* (90)

statue NMLZR Kunle own

‘the statue that Kunle owns’

<sup>32</sup> Payne (1997: 223) tells us that “. . . operations that allow a verb to function as a noun. . . are called nominalizations, and can be described with a simple formula: V → N.” Malchukov (2004: 6) characterizes it as a transcategorical operation, noting that “‘nominalization’ actually conflate[s] two properties: “deverbalization. . . and substantivization (acquisition of noun-properties)”.

- b. *Mo ri* [**ti** *Kúnlé*] (107)

1SG see NMLZR Kunle

'I saw Kunle's.'

- Cf. [*ère* [**ti** *Kúnlé*]]

statue NMLZR Kunle

'Kunle's statue'

The Indo-European language Nepali marks both V-based argument nominalizations and event nominalizations the same as N-based nominalizations, as shown below.

- (98) Nepali (courtesy of Madhav Pokharel)

- a. V-based event nominalization

[[*u* *Dhilo aa-e*]=**ko**] *durbaagya bha-yo*.

s/he late come-PF-NMZLR unfortunate BE-PFV

'That s/he came late was unfortunate.'

- b. V-based argument nominalization

[[*Madhav le ma laai di-e*]=**ko**] *ma paDh-dai chu*

Madhav ERG I DAT gv-PF-NMLZR I read-PROG am

'I am reading what Madhav gave me.'

- Cf. [[[*Madhav le ma laai di-e*]=**ko**] *kitab*]

Madhav ERG I DAT gv-PF-NMLZR book

'the book that Madhav gave me'

- c. N-based nominalization

[*Madhav*=**ko**] *ma paDh-dai chu*

Madhav=NMLR I read-PROG I

'I am reading Madhav's.'

- Cf. [[*Madhav*=**ko**] *kitab*]

Madhav=NMZLR book

'Madhav's book'

A comparable pattern is seen in Modern Hebrew, in which *she* marks a similar range of nominalizations as in Nepali (also see Shibatani and bin Makashen (2009) for another Semitic language Soqotri).

- (99) Modern Hebrew (courtesy of Ana-Marie Hartenstein)

- a. *Ani yodaat* [**she** [*ata lo bemet rofe*]]

I know NMLZR you no real doctor

'I know that you are not really a doctor.'

- b. *zo* [**she** [*Yoav raa etmol*]] *xi xavera sheli*

this.FEM NMLZR Yoav saw yesterday is friend my

'The one Yoav saw yesterday is a friend of mine.'

- c. [*Ha-kova* [*she-l* Moshe]] *shachor*, *aval* [*she-l* Yakov] *chum*.  
 ART-hat NMLZR-DAT? Moshe black but NMLZR-DAT? Yakov brown.  
 ‘Moshe’s hat is black but Yakov’s is brown.’

Next, those languages that use classifiers as nominalizers may mark both V-based and N-based nominalizations by classifiers, as in Cantonese below.

(100) Cantonese (Matthews and Yip 1994 and p.c.)

- a. V-based nominalizations marked by classifiers

[*Ngóhdeih hái Faatgwok sihk*] *dī* *yéh* *gái* *hóu-sihk ga*.  
 we in France eat CLF food quite good-eat PRT  
 ‘The food we ate in France was pretty good.’

[[*Gaaú léih tàahn kàhm*] *gó*] *gò?*  
 teach you play piano that CLF  
 ‘The one who teaches you piano?’

- b. N-based nominalizations marked by classifiers

[*léih (gó) dī*] *pàhngyáuh* (108)  
 you (that) CLF friend  
 ‘those friends of yours’

[*léih gò*] *pàhngyáuh* (108)  
 you CLF friend  
 ‘your friend’

*Lī dēoi* *hai* [*ngóh dī phàhngyáuh*],  
 these (lit. this pile) COP I CLF friend

[*léih gó dī*] *hóeng gópihn*. (courtesy of Haowen Jiang)  
 you that CLF LOC there  
 ‘These are my friends, and yours are over there.’

Similar use of classifiers is also seen among Amazonian languages, as shown by the Tucano language Barasano in Colombia.

(101) Barasano (Tucano; Jones and Jones 1991)

- a. V-based nominalization

[*hũu* [*ō kãhi-ri-ku*] *ãbo-a-ha yũ*] (150)  
 hammock there hang-NMLZR-CLF want-PRS-3 1SG  
 ‘I want the hammock that is hanging there.’

- b. N-based nominalization

[*hũu* [*ĩ-ya-gũ*]] (61)  
 hammock 3MASC.SG-NMLZR-CLF  
 ‘his hammock’



Barasano has different nominalizers for V-based (-*ri*) and N-based (-*ya*), as do many other languages. However, the results of the nominalizations are treated alike, as indicated by use above of the same classifier marking *ku/gu*, which is for a long hammock. Both V-based and N-based forms have NP-use such that (101a), without the head noun *hũu*, would mean “I want one (hammock-thing) hanging there” and (101b) “his (hammock-thing)”.

In the related language Tuyuca, classifier marking is optional for the N-based nominalization in the modification-use, while it is obligatory in the NP-use, as seen below<sup>33</sup>.

(102) Tuyuca (Tucano; courtesy of Janet Barnes)

a. V-based nominalization

[*niká* [*bako-á-ri-gĩ*]]

leg to.have.been.bitten-RECENT-SG.NMLZR-CLF

<clindrical.shape,long.and.solid>

‘the leg that was bitten’

b. N-based nominalization

[[*yĩ* *pakí-ya-ró*]<sub>NMLZ</sub>]<sub>NP</sub>

my father-NMLZR-CLF.2D.flexible

‘my father’s’ (as in “They are my father’s/My father’s are those.”)

b'. [[*yĩ* *pakí-ya(-ró)*]<sub>NMLZ</sub> *sirúra*]<sub>NP</sub>

my father-NMLZR(-CL.2D.flexible) trouser

‘my father’s trousers’

This is the pattern that we find in the Tibeto-Burman language Newar, which has classifier-based nominalizers. Observe the data below, where an N-based form has its own nominalizer (-*yā*), but it further takes the nominalizer marking V-based nominalization (-*mha*), indicating that N-based nominalizations are treated like V-based nominalizations.

(103) Newar (courtesy of Kazuyuki Kiryu)

a. [[*ana* *dan-ā* *cwā=****mha***] *macā*] [*rām=yā*]=***mha*** *kha:*.

there stand-CM exist.ND=NMLZR child Ram=NMLZR=NMLZR COP

‘The child standing over there is Ram’s.’

b. [*ana* *dan-ā* *cwā=****mha***] [*rām=yā(=****mha***<sup>34</sup>) *macā*] *kha:*.

there stand-CM exist.ND=NMLZR Ram=NMLZR(=NMLZR) child COP

‘The one standing there is Ram’s child.’

<sup>33</sup> In Bora, only nominal-based nominalizations appear to be marked by classifiers only in their NP-use.

<sup>34</sup> As in the Tuyuca case, this nominalizer is optional in modification-use.

Finally, Bantu noun-class marking, which also has a nominalizing function<sup>35</sup>, marks both V-based and N-based nominalizations, as shown by the Chichewa examples below.

(104) Chichewa (Mchombo 2004 and p.c.)

a. V-based nominalization in NP-use

[[**chi-méné** *ndí-ná-gúla*]<sub>NMLZ</sub>]<sub>NP</sub> *chi-ná-lí ch-ódúla*.  
 7-NMLZR I-PST-buy 7-PST-be 7-expensive  
 ‘What I bought was expensive.’

a’. N-based nominalization in NP-use

[[**ch-ángá**]<sub>NMLZ</sub>]<sub>NP</sub> *chí-ma-sangaláts-á a-lenje*.  
 7-my 7-HAB-please-FV 2-hunters  
 ‘Mine pleases hunters.’

b. V-based nominalization in modification-use

[*chi-péwá* [**chi-méné** *ndí-ná-gúla*]<sub>NMLZ</sub>]<sub>NP</sub> *chi-ná-lí ch-ódúla*.  
 7-hat 7-NMLZR I-PST-buy 7-PST-be 7-expensive  
 ‘The hat that I bought was expensive.’

b’. N-based nominalization in modification-use

[*chi-péwá* [**ch-ángá**]<sub>NMLZ</sub>]<sub>NP</sub> *chí-ma-sangaláts-á a-lenje*.  
 7-hat 7-my 7-HAB-please-FV 2-hunters  
 ‘My hat pleases hunters.’

All in all, there is ample evidence that languages around the globe also nominalize nouns and noun phrases.<sup>36</sup> Our reanalysis of the so-called genitive case as an N-based nominalizer not only captures the parallel patterns exhibited by V-based and N-based nominalizations we have examined above, but also does away with the genitive case/possessive form altogether. Our analysis makes it abundantly clear that the so-called genitive case is not a case inflection as in the inflection seen, for example, between the nominative form (e.g. *he*) and the accusative form (*him*), which denote/refer to the same entity but express different grammatical meanings. The genitive form (*his*) derives a new nominal denoting/referring to an entity distinct from the base form. The former are like the plural inflection of the *pig* : *pigs* pattern, while the latter is a derivation as seen in *pig* > *piglet*, *village* > *villager*, etc. The form known as genitive does not belong to the inflectional paradigm contrary to the long-standing and widely accepted inflectional paradigm.

<sup>35</sup> Cf. Digo forms; *ku-fwits-a* [15-hide-fv] ‘hiding’, *m-ris-a* [1-feed-fv] ‘herdsman’, *chi-tsek-o* [7-laugh-fv] ‘laughter’, *chi-digo* [7-Digo] ‘Digo language/culture’. Nicolle (2013)

<sup>36</sup> Cf. [[[*the Queen of England*]<sub>NP</sub>’s]<sub>NMLZ</sub> *hat*]<sub>NP</sub>

## 6 Summary and implications

After summarizing the discussions above in general terms, section 6.1 offers a synopsis of the patterning of the structure-use/function-form triad, followed by the final subsection discussing the implications of the present study for both descriptive and theoretical exercises.

Past studies on nominalization tended to focus on lexical nominalizations because they typically have clear morphological marking. We showed in the beginning that across different languages the same lexical nominalization morphology may apply to units larger than words, suggesting the existence of grammatical nominalizations. The field has been slow to recognize grammatical nominalizations because many do not have clear nominal morphology or the forms involved have the same verbal form as in clauses and sentences. We have argued that the notion of nominalization is neither morphological nor syntactic, but functional. Crosslinguistic investigations reveal clearly that formally different structures cohere in their semantic and usage patterns, supporting this view. At the same time, such studies provide crucial evidence that is hard to find when dealing with single languages such as Japanese and English.

We have argued that traditional studies fail to distinguish between structures and their use, a failure that has led to the recognition as independent constructions that are no more than different uses of the same basic structures. We have argued strongly that relative clauses are simply uses of grammatical argument nominalizations. So-called internally headed RCs are event nominalizations in NP-use, and evoke various concepts metonymically related to the events such as the abstract concepts of facts and propositions or concrete concepts such as event protagonists and resultant products. What are known as headless relative clauses are instances of the NP-use of argument nominalizations, which also have a modification-use giving rise to ordinary relative clause constructions with a modified head noun.

The reanalysis of the genitive case or the possessive form as a nominal-based nominalization reveals that nothing like possessive pronouns and possessive adjectives exist as separate parts of speech. Similar to the case of relative clauses, they are no more than two uses of N-based nominalizations. We have provided ample crosslinguistic evidence in support of this new analysis.

### 6.1 Structure, use, and form

One of the most interesting things to observe in crosslinguistic research is the way languages respond to unity and divergence of function in terms of linguistic forms. The functional unity underlying nominalization phenomena is the creation of nominal structures denoting entity concepts. The divergences stem from several factors. One is the difference in input, i.e. verbal-based or nominal-based. The outputs of the

nominalization process are of several types. We distinguished between lexical and grammatical nominalizations, the former being nouns registered in the lexicon and the latter non-lexical grammatical structures created for the nonce. Of the grammatical nominalizations, there are event nominalizations and argument nominalizations. These nominalizations play different functions depending on their use, in particular whether they head a noun phrase, where they play referential function, or they modify a head noun, either restricting the denotation of the head noun (so-called restrictive relative clauses) or identifying the denotation of the head noun (so-called non-restrictive or appositive relative clauses). We have seen above that languages respond to these functional similarities and divergences in different ways. An interesting question to be raised is whether general crosslinguistic patterns emerge on the basis of which we might be able to make predictions about change in form over time.

As for the distinction between lexical and grammatical nominalizations, languages in general make a clear formal distinction between the two. Yet, we have seen that a fair number of languages do formally express the functional unity between the two by marking both types in a morphologically uniform way. Indeed, in some cases the form is ambiguous allowing either a lexical or grammatical interpretation. For example, the Mayrinax Atayal form in (23a) can be interpreted either lexically (in the sense of the word “singer”) or grammatically (in the sense of “the one who sings”). In situations like this, it is likely that grammatical nominalizations give rise to lexical nominalizations, where a form denoting an entity in an analytic manner has been applied to an entity whose meaning is not entirely compositional, as in the case of designating a person who sings routinely or whose singing constitutes a professional activity. The opposite direction of development, where the marking of lexical nominalizations has been extended to grammatical nominalizations needs to be documented.

Turning to the distinctions between nominal-based and verbal-based nominalizations and between event and argument nominalizations, many languages of the world make clear formal distinctions in them. But, again, a fair number of languages from different parts of the globe formally express functional unity by morphologically marking them in a similar way. We recognize two patterns of formal identity across these types of nominalization. One pattern expresses the fundamental functional unity that binds all these types of nominalization (i.e. that they are all nominalizations), using the same nominalizing morphology for all of them, as in Nepali (see (98)) and Modern Hebrew (99), among others. The other, perhaps more widespread pattern responds to the commonality in their use function by marking the same all these types of nominalization (only) when they are in NP-use. This can be seen most clearly in Telugu, where the particle *di* marks the shared referential function of nominalizations in NP-use in a uniform manner, as below. Some other Dravidian languages, Korean (93), Gã (94), and a variety of Ryukyuan (Shibatani and Shigeno 2013) and Japanese dialects (Shibatani 2017) show this marking pattern.

(105) Telugu (courtesy of K.V. Subbarao)

a. N-based nominalization in NP-use

*idi naa-di*. Cf. *naa pustakam*

this my-PRT my book

‘This is mine.’ ‘my book’

b. V-based event nominalization in NP-use

[*vāḷḷu vacc-in-a-di naaku telusu*.

they.NOM come-PST-NMLZR-PRT to me known

‘I know that they came.’

Cf. [*vāḷḷu vacc-in-a]* *sangati*

they.NOM come-PST-NMLZR news

‘the news that they came’

c. V-based argument nominalization in NP-use

*neenu [vāḷḷu icc-in-a-di cadiveenu*.

I.NOM they NOM give-PST-NMLZR-PRT read

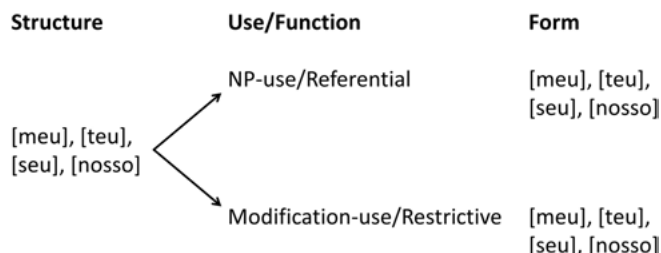
‘I am reading what they gave (me).’

Cf. [*vāḷḷu icc-in-a]* *pusutakam*

they.NOM give-PST-NMLZR book

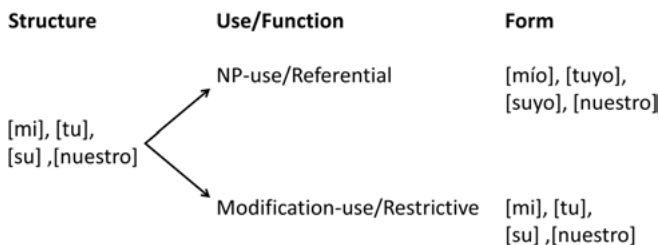
‘the book which they gave (me)’

Many languages make a clear formal distinction between N-based and V-based nominalization, and between V-based event nominalization and V-based argument nominalization. English and many others have special forms (known as the genitive case or possessive form) for N-based nominalization distinct from those for V-based nominalizations (traditionally referred to as participial, infinitive, or adnominal). A comparison of Portuguese and Spanish pronoun-based nominalizations reveals how different languages respond differently to the functional demand at two different levels. Portuguese unifies the forms in favor of formally expressing the functional unity underlying the pronoun-based nominalizations – that the relevant forms are of the same substance regardless of their use; NP-use: *Olhe para o [meu]* ‘Look at mine’; Modification-use: *Olhe para o [meu] livro* ‘Look at my book’.



**Figure 5:** Portuguese pronoun-based nominalizations for first- (*meu*), second- (*teu*), third-person (*seu*) singular masculine forms and first-person plural masculine form (*nosso*)

Spanish, on the other hand, differentiates forms according to their use/function so as to express formally the difference in the usage and function; MP-use: *Mira el [mío]* “Look at mine”; Modification-use: *Mira [mi libro]* “Look at my book”.



**Figure 6:** Spanish pronoun-based nominalizations for first- (*mi*), second- (*tu*), third-person (*su*) singular masculine forms and first-person plural masculine form (*nuestro*)

Interestingly, the actual use of Portuguese pronoun-based nominalizations shows that they are also marked differently according to the usage/function. That is, when these forms are used as NP-heads, they are obligatorily marked by a definite article, except when used predicatively. On the other hand, when these forms are used as a prenominal modifier, a definite article is optional. Observe:

(106) Portuguese

- a. [*O meu*]<sub>NP</sub> *é aquele carro.*  
 the.MSC 1.SG.MSC.NMLZ is that car  
 ‘Mine is that car.’
- b. [(*O meu carro*)]<sub>NP</sub> *é aquele.*  
 (the.MSC) 1.SG.MSC.NMLZ car is that  
 ‘My car is that one.’

In a very interesting paper, Kupisch and Rinke (2011: 109) show a dramatic increase in the use of a definite article in the modification-use of pronoun-based nominalizations in Portuguese (the (106b) pattern), from almost zero use of a definite article in the 13th century to the 90% level of use in the 19th century. What this means is that the formal difference between the two usage patterns in Old Portuguese has gradually been lost in favor of formally expressing the functional unity underlying different uses of pronoun-based nominalizations.

Shibatani’s study of Ryukyuan and Japanese dialects (Shibatani and Shigeno 2013) shows that forms in NP-use tend to be more complex than the ones seen in modification-use, the former with an explicit marker for the referential function that the forms in NP-use play (see Fig. 6). Over the time, however, the complex forms in NP-use spread to the modification context, leveling the formal difference between the two uses, as in the Portuguese development seen above. The leveling is incomplete in Portuguese because definite marking in the modification-context is still optional. This is a typical transitional pattern seen also seen in Newar, where the

use of the markers for NP-use is optional in the modification context, while it is obligatory in NP-use (see *-mha* and *-gu* marking in nominal-based nominalizations in (80), (81), and (103)), and in Tuyuca (see (102b) and (102b')).

Shibatani and Shigeno (2013) also shows that once a language achieves uniformity in formal marking across different uses of the same type of nominalization, it begins to differentiate forms according to the difference in the use, by adding an extra marker to the forms in NP-use. This cyclic development seems to be one way for a language to negotiate with the opposing forces for formal uniformity (expressing the underlying unity) and divergence (expressing the difference in usage/function).

A similar observation can be made about the form-function patterning in verbal-based nominalizations, where we can observe how commonly attested nominalizers qua relativizers develop; i.e. from determiners to nominalizers/relativizers. Recall that Toba allows V-based nominalizations without any nominalization marker, which, however, must be marked by a demonstrative determiner when they head an NP, similar to the Portuguese pronoun-based nominalization in NP-use in (106a). In the modification-use, however, a demonstrative determiner is not used, as in (107b) below.

(107) Toba (courtesy of Cristina Messineo)

a. NP-use

[so [neta'age da Chaco]<sub>NMLZ</sub>]<sub>NP</sub> i-waGan so Juan  
DD 3.exist.DIR DD Chaco 3-hit DD Juan  
'The one who lives in Chaco hit Juan.'

b. Modification-use

[[so fijaGawa [Ø [neta'age da Chaco]<sub>NMLZ</sub>]<sub>NP</sub> i-waGan so Juan  
DD man 3.exist.DIR DD Chaco 3-hit DD Juan  
'The man who lives in Chaco hit Juan.'

The demonstrative determiner marking in NP-use has not yet been extended to the modification context above, where the Ø marker indicates its absence in (107b).<sup>37</sup> When we turn to K'ichee', we see that the determiner marking of V-based nominalization in NP-use has been extended to the modification context, as seen below.

(108) K'ichee' (courtesy of Telma Can Pixabaj)

a. x-Ø-inw-il **lee** [ixoq]  
ASP-3SG.ABS-1SG.ERG-see the woman  
'I saw the woman.'

<sup>37</sup> Presumably it is possible to use a DD in the place of Ø in (107b), but it would result in a structure different from a restrictive relative clause construction. Such a structure (an appositive construction) is possible in Spanish, which distinguishes between a restrictive RC and an appositive construction, the latter using an argument nominalization in NP-use with an article as a modifier. Cf. [el hombre [que viene mañana]<sub>NMLZ</sub>]<sub>NP</sub> 'the man who is coming tomorrow'; [el hombre [el [que viene mañana]<sub>NMLZ</sub>]<sub>NP</sub>]<sub>NP</sub> 'the man, the one who is coming tomorrow'.

- b. *x-Ø-inw-il* **lee** [*x-Ø-u-ch'ay*  
ASP-3SG.ABS-1SG.ERG-see the/NMLZR ASP-3SG.ABS-3SG.ERG-hit  
*lee achih*]<sub>NMLZ</sub>  
the man  
'I saw the one whom the man hit/I saw the one who hit the man.'
- c. *x-Ø-inw-il* [*lee ixoq* **lee**  
ASP-3SG.ABS-1SG.ERG-see the woman the/NMLZR  
[*x-Ø-u-ch'ay* *lee achih*]<sub>NMLZ</sub>]  
ASP-3SG.ABS-3SG.ERG-hit the man  
'I saw the woman whom the man hit/I saw the woman who hit the man.'

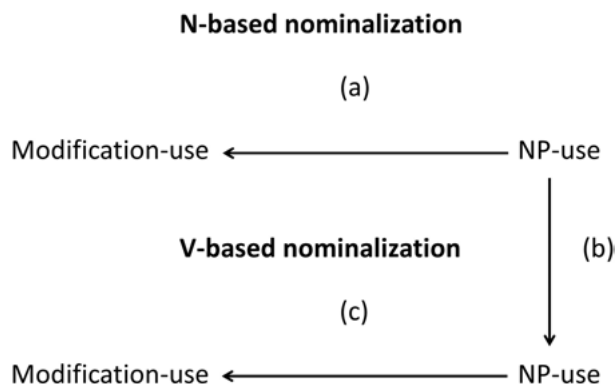
The use of *lee* in the modification context as in (108c) does not seem entirely obligatory at present, though its use appears highly favored according to the investigation of its status by a K'ichee' specialist known to the present author. In other words, the determiner *lee* is in a final stage of becoming a nominalizer/relativizer, so that V-based nominalizations become formally uniform in both the contexts of NP-use and modification-use, as in (108b) and (108c). Compare these with the Toba forms in (107), where the forms of V-based nominalizations are distinguished according to the usage pattern. K'ichee' would eventually reach the stage where the determiner *lee* becomes an obligatory nominalizer/relativizer as in German, which has also developed nominalizers out of determiners. Observe the following where *der* marking V-based nominalizations is obligatory in both NP- and modification-use.

(109) German

- a. [Der morgen kommt]<sub>NMLZ</sub>NP  
ART.MSC.SUB SUB-NMLZR.MSC tomorrow comes  
*ist mein Freund.*  
is my friend  
'The one who (MSC) comes tomorrow is my friend.'
- b. [Der Mann **der** morgen kommt]<sub>NMLZ</sub>NP  
ART.MSC.SUB man SUB-NMLZR.MSC tomorrow comes  
*ist mein Freund.*  
is my friend  
'The man who comes tomorrow is my friend.'

On the basis of a detailed study of nominalizations and their marking patterns in Amami Ryukyuan and other Ryukyuan as well as Japanese varieties, Shibatani and Shigeno (2013: 120) posit the following hypothesis regarding the spread of nominalization markers, which may eventually become nominalizers when their occurrence becomes obligatory regardless of the usage pattern of nominalizations, as in the German case seen above.





**Figure 7:** Directions of spread of nominalization markers

The development patterns (a) and (c) have been described above. Pattern (b) needs to be more widely investigated. Figure 7 shows the importance of N-based nominalizations. Their NP-use is the locus of innovation that spreads to V-based nominalizations.

## 6.2 Implications

The crosslinguistic study of nominalizations and their roles in grammar presented above has some far-reaching implications for both descriptive practice and theoretical issues. One is a reassessment of the role of the NP-Accessibility Hierarchy in the analysis of relative clauses proposed in Keenan and Comrie (1977), the single most influential paper on this subject. Our new analysis suggests that grammatical relations actually have nothing to do with relative clause formation per se, which is viewed as bringing a grammatical argument nominalization and a head noun together without ever asking whether what is being relativized on is Subject, Object, or Oblique. A so-called subject relative clause is simply a modification of a noun by a subject nominalization, and a so-called object RC is no more than bringing an object nominalization and a head noun together under the modification function. Under the proposed analysis of RC constructions, there is no process involved that “accesses” an argument position, as in the traditional generative analysis, which creates a gap in an argument position as part of the relativization process. In our analysis a gap seen in the modifying structure of an RC construction is a property of an argument nominalization.

This does not invalidate a hierarchy of grammatical relations like the one posited by Keenan and Comrie. Indeed, such a hierarchy is plausible for argument nominalizations, since some languages, such as Yup'ik, allow only argument nominalizations of the absolutive argument. Apparently some dialects of K'ichee' are like Yup'ik, while other dialects allow argument nominalizations pointing to both absolutive and ergative roles, as the examples cited in this chapter (see Larsen and Norman 1979). Those Austronesian languages (many Formosan and Philippine

languages as well as Malagasy) maintaining the proto-Austronesian four-way focus contrast allow argument nominalizations of various types, such as subject nominalization, object nominalization, locative, and beneficiary (see the Malagasy-German comparison in the following discussion). Those that have reduced the focus contrast to two (AF and PF), as in many languages of Indonesia (Bahasa Indonesia, Javanese, Balinese, Sasak, etc.), allow only subject and object nominalizations; obliques must be first made applicative objects before they can be the target of argument nominalization. The English and German gerundive argument nominalization applies only to subjects; e.g. *the man* [**Ø holding a book in hand**], \**the book* [**the man holding Ø in hand**].

Our point is that while argument nominalizations refer to grammatical relations, the relativization process itself does not, contrary to the claim advanced by Keenan and Comrie. Indeed, the relevance of relational hierarchies makes much more sense in the metonymy-based analysis of nominalization than the clause-based analysis of relativization. Since the absolutive/ergative and the subject/object arguments code most salient event protagonists intimately associated with a wide range of event types, they are the easiest to evoke metonymically. In contrast, what do grammatical relations have to do with the restricting function of the restrictive RC construction (see Figure 3) or the identifying function of the non-restrictive RC construction?

Our new analysis also shows that those Austronesian languages, e.g. Malagasy and Tagalog, in particular, that are claimed to obey the subject-only constraint on relativization actually relativize on any argument as do German, which is said to relativize down to the genitive position in the Accessibility Hierarchy. Keenan and Comrie demonstrate that relativization on a subject (110b) is possible in an Actor focus construction, but an object in such a construction cannot be relativized on (110c). For an object to be relativized on, it must be made subject by turning an AF construction to a Patient focus construction (111b).

(110) Malagasy AF construction

- a. *n-i-kapoka ilay alika t-aminy hazokely ilay lehilahi*

PST-**AF**-hit DEF dog PST-with stick DEF man

‘The man hit the dog with a stick.’

- b. *n-a-hita ilay lehilahy (izay)*

PST-**AF**-see DEF man NMLZR

[*n-i-kapoka ilay alika t-aminy hazokely Ø*] aho

PST-**AF**-hit DEF dog PST-with stick 1SG

‘I saw the man [who Ø hit the dog with a stick].’ (AF-NMLZR + SUB NMLZ)

- c. \**n-a-hita ilay alika (izay)*

PST-**AF**.see DEF dog NMLZR

[*n-i-kapoka Ø t-aminy hazokely ilay lehilahi*] aho

PST-**AF**-hit PST-with stick DEF man 1SG

‘I saw the dog [that the man hit Ø with a stick].’ (AF-NMLZR + OBJ NMLZ)

## (111) Malagasy PF constructions

- a. *no-kapoh-in-ily lehilahy t-aminy hazokely ily alika*  
 PST-hit-PF-DEF man PST-with stick DEF dog  
 'The man hit the dog with a stick.'

- b. *n-a-hita ily alika (izay)*  
 PST-AF-see DEF dog NMLZR  
*[no-kapoh-in-ily lehilahy t-aminy hazokely Ø] aho*  
 PST-hit-PF-DEF man PST-with stick 1SG  
 'I saw the dog that Ø was hit by the man with a stick.'

(PF-NMLZR + OBJ NMLZ)

Assuming PF and other non-AF constructions to be passive, Keenan and Comrie conclude that only subjects can be relativized on in Malagasy, instantiating a language in which the subject-only constraint on relativization obtains (Keenan and Comrie 1977, Comrie and Keenan 1979). As it turns out, the real reason why (110c) is ungrammatical is not because what has been relativized on (the gap position) is in object position, but because the construction has an incompatible combination of AF marking and object nominalization. Recall from the earlier discussion on another focusing Austronesian language Mayrinax Atayal (see (23) and (31)) that focus marking in Austronesian has a role-marking function for argument nominalizations, where AF marking in the verb marks a subject nominalization, PF marking an object nominalization, LF marking a locative nominalization, and CF marking a beneficiary or an instrumental nominalization. AF marking, therefore, can combine only with a subject nominalization, as in (110b), and cannot combine with an object nominalization, as in (110c). An object nominalization must be marked by the PF marker in the verb, as in (111b)<sup>38</sup>, not by the AF marker as in (110c).

Languages with role-marking nominalizers all behave this way, such that a subject/agent nominalizer must mark a subject nominalization, an object/patient nominalizer an object nominalization, and so forth. Indeed, the Malagasy pattern is paralleled by German, which also has role-marking nominalizers, similar to AF and PF markers in focusing Austronesian languages (see 24)). Observe:

## (112) German subject nominalization

- a. *Der Junge sieht den Hund.*  
 ART boy sees ART dog  
 'The boy sees the dog.'

- b. [*der Junge [der [Ø den Hund sieht]]]*  
 ART boy SUB-NMLZR ART dog sees  
 'the boy who sees the dog' (SUB-NMLZR + SUB NMLZ)

<sup>38</sup> Like many other languages, e.g. Mongolian, Turkish, Japanese, Yaqui, and Quechua, object nominalizations in focusing Austronesian languages have an agent in the genitive form.

- c. \**[der Hund [der [der Junge sieht Ø]]*  
 ART dog **SUB-NMLZR** ART boy sees  
 ‘the dog that the boy sees’ (SUB-NMLZR + DO NMLZ)
- d. *[der Hund [den [der Junge sieht Ø]]*  
 ART dog **OBJ-NMLZR** ART boy sees  
 ‘the dog that the boy sees’ (DO-NMLZR + DO NMLZ)

The reason that (112c) is bad is not because German cannot relativize on an object, but because it has the incompatible combination of a subject nominalizer and an object nominalization, just as in (110c) for Malagasy. (112d) is grammatical because the object nominalizer marks an object nominalization, just like the Malagasy form (111b). We see an exact parallelism between Malagasy and German. Indeed, Malagasy can relativize on any argument and adjunct that German can as long as the marking pattern is consistent. Just to drive the point home, another parallelism between the two languages using an oblique nominalization and its use as a modifier (relative clause) is shown below.

(113) German oblique/source nominalization

- a. NP-use  
*Ich treffe den [[von dem ich das Buch*  
 I meet ART **from IO.NMLZR** I the book  
*bekommen habe]<sub>NMZN</sub>]<sub>NP</sub>*  
 receive.PP have  
 ‘I meet the one from whom I received the book.’
- b. Modification-use  
*Ich treffe den [Mann [von dem ich das Buch*  
 I meet ART man **from IO.NMLZR** I the book  
*bekommen habe]<sub>NMZN</sub>]<sub>NP</sub>*  
 received have  
 ‘I meet the man from whom I received the book.’

(114) Malagasy oblique/source nominalization

- a. NP-use  
*Ho hita-ko ilay [n-indrama-ko (an'ilay/ilay) boky]*  
 FUT see-1SG.GEN the PST-borrow.CF-1SG.GEN (the/the) book  
 ‘I will see the one from whom I borrowed the book.’
- b. Modification-use  
*Ho hita-ko ilay lehilahy [n-indrama-ko*  
 FUT see-1SG.GEN the man PST-borrow.CF-1SG.GEN  
*(an'ilay/ilay) boky]*  
 (the/the) book  
 ‘I will see the man from whom I borrowed the book.’

The parallelism between German and Malagasy is again clear – (113) and (114) are grammatical RC constructions because the nominalizers mark correct nominalization structures in both cases. If the nominalizers in them were the subject nominalization marker *der* for German or the subject nominalizing AF form for Malagasy, both would be ungrammatical. As long as nominalizers and nominalization structures are kept consistent, both languages can nominalize any argument down to the genitive in the relational hierarchy, and the resulting nominalizations can be used as modifiers (relative clauses). We can observe the same thing in English, which has an object nominalizer that uniquely marks human object nominalizations, and which, therefore, cannot combine with a subject nominalization, as in (115b') below.

(115) English object and subject nominalizations

- a. *Marry* [*who/whom* [*you love*  $\emptyset$ ]] (object nominalization)
- a'. *Marry a man* [*who/whom* [*you love*  $\emptyset$ ]]
- b. *Marry* [*who/\*whom* [ $\emptyset$  loves *you*]] (subject nominalization)
- b'. *Marry a man* [*who/\*whom* [ $\emptyset$  loves *you*]]

As is clear from the above, the proposed nominalization-based analysis of relative clause constructions yields a very different result from the traditional clause/sentence-based analysis by Keenan and Comrie (1977), Comrie and Keenan (1979) and others. This is true of all focusing Austronesian languages such as Atayal and other Formosan languages, Tagalog and other Philippine languages, Malay/Indonesian, Sasak, Sumbawa, and others (see Shibatani (2008) on Sasak and Sumbawa).

A final note on a theoretical issue that our analysis raises concerns the power of the grammar. The analysis of so-called relative clauses and complement clauses as nominalizations rather than as clauses allows a much tighter theoretical framework for syntactic analysis; namely only structures of equal or lower rank can be embedded within a given structure. Current theories, which consider relative clauses and complement clauses as clauses, allow clauses to be embedded under a structure lower in rank such as NP and VP. Such theories allowing any type of embedding are too powerful and hence are weak theories.

As these brief comments suggest, the new analysis of nominalizations proposed in this chapter opens up many interesting new developments in both descriptive and theoretical arenas.

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# 13 Clausal noun-modifying constructions

## 1 Introduction

The clausal noun-modifying construction (NMC)<sup>1</sup> in Japanese is a complex noun phrase that is formed by a noun and a prenominal clause that modifies it. The examination of naturally-occurring NMCs in Japanese demonstrates that, as a single structure, the construction encompasses what conventional accounts refer to as relative clause constructions (RCCs) and noun complement constructions (NCCs), and also includes other types of complex noun phrases that do not readily fit into those two commonly discussed categories. The ubiquitous occurrence of NMCs in the language offers insights into characteristic features of Japanese and suggests a fundamentally different perspective to the analysis of NMCs from the dichotomous classification of noun-modifying clauses into relative and noun complement clauses, which is often posited in the analysis of languages such as English. In that light, this chapter considers Japanese clausal noun-modifying constructions,<sup>2</sup> highlighting characteristics that are not generally found in English, but that are found in certain other languages across Eurasia and some other parts of the world.

Relative clause and noun complement clause constructions are commonly distinguished syntactically from each other depending on the existence or lack of a syntactic gap in the modifying clause. Thus, for example, in the noun phrase in English *the book {which/that/Ø} the student read*, the semantic relationship of the head noun to the relative clause *the student read* is strictly determined by the syntax of the relative clause, i.e., by the existence of a reference-binding relationship between the head noun and either a relative pronoun (or possibly a conjunction, on one analysis of relative *that*) or a syntactic gap in the modifying clause. In contrast, the predominant structural feature of noun complement clauses, as in *the fact that the student read the book*, is the absence of a clause-internal gap. If there is an apparent gap, the construction must be interpreted as a relative clause, as in *the fact that the student described*.

As we will see in more detail in the following section, the existence or the lack of a missing argument in the subordinate clause does not categorically distinguish a relative clause from a complement clause in Japanese. That fact is a consequence of

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<sup>1</sup> Nouns can be modified by a determiner, another noun, or a noun followed by the genitive case marker *no*, but for our purpose, our discussion only focuses on modification by a clause. The abbreviation NMC, therefore, refers to clausal noun-modifying constructions.

<sup>2</sup> Our discussion focuses on instances whose head nouns are more semantically substantial than so-called “light” or “formal” head nouns, such as *koto* ‘thing’, *tokoro*, ‘place’, *no* ‘one’, etc. (See Takara 2012)

more general characteristics of the language. For example, arguments are not necessarily expressed in a complement clause because of the relatively low referential density in Japanese (Bickel 2003; Noonan 2003), while there are relative clause-like constructions that present no syntactic gap, such as *genki ga deru kuruma* '(lit.) the car (by owning/driving which) one's energy rises', in which there is no missing argument in the clause (e.g. Matsumoto 1988a, 1988b). Nevertheless, the syntactic dichotomy between relative clauses and noun complement clauses has been maintained in investigations of Japanese within the generative framework, notwithstanding some controversy with regard to the specific treatments of Japanese "relative clauses" between the analysis based on a deletion of the target noun with its case marker in the embedded clause under coreference with the head noun (e.g. Nakau 1973; Okutsu 1974; Inoue 1976; Shibatani 1978) and the analysis based on movement of the relevant element (e.g. Hasegawa 1981; Saito 1985; Kuroda 1992; Murasugi 1991). The thematic deletion proposal from the standpoint of functional syntax (Kuno 1973), which claimed that the deleted element in the embedded clause is a thematic NP and not simply a coreferential NP (with the case marker), also assumes the syntactic dichotomy between relative clauses and noun complement clauses.

Teramura (1975–78), on the other hand, reflecting theoretical influences of pre-generative grammarians and of 20th century Japanese grammarians, emphasized the need to pay attention to characteristics of Japanese that do not conform to frameworks devised to treat European languages. Largely based on authentic data, he developed an analysis in which the relations that hold between the head noun (i.e. *soko no meishi* 'base noun' in Teramura's terms) and the modifying clause were classified into two major types: *uchi no kankei* 'inner relationship' and *soto no kankei*, 'outer relationship'. The inner relationship is such that the head noun could be inserted into the modifying clause with a case marker to compose a sentence, i.e., the head noun is basically in a case relation with the subordinate clause predicate; whereas, in the outer relationship, the clause semantically supplements the content of what is designated by the head noun. Teramura further claimed that the condition for inner relationship constructions was solely structural and comparable with the relative clause construction in English, while the outer relationship was semantic as it required a semantically special kind of head noun (i.e. a "content" noun). While Teramura's analysis did not treat NMCs as composed of two separate constructions whose distinction depended on a missing argument in the modifying clause, it suggested a clear division between purely structurally controlled (inner relation) and semantically sensitive (outer relation) subtypes.

Teramura himself noted, however, the existence of problematic instances that do not fit into either subtype, and therefore stated that the distinction between the inner and outer relations was not completely clear-cut. As we will discuss further in section 2, one notable instance of the problematic NMCs he cited is *[[atama no yokunaru] hon] hon* 'the book (by reading which) (X's) head gets better'. No inner-relationship equivalent sentence could be constructed by reinserting the head noun

with its case marker into the modifying clause, since no case marker could solely represent the relation between the head noun and the subordinate clause. However, the NMC did not fit within the definition of outer relation, since the head noun was not of the semantically special types found in outer relationship NMCs. Teramura therefore treated this type of example as a *tanraku no uchi no kankei* “‘truncated’ inner relationship’ case, since it needed an adverbial phrase (such as *sono hon o yomeba* ‘if (one) reads the book’), not simply a case marker, to represent the relation between the head noun and the subordinate clause to construct an equivalent sentence.

Another type of problematic instance Teramura noted was a group of examples that, at first sight, could be categorized as outer relation NMCs, such as [*kare ga syukke o sita*] *dooki* ‘the motive for his becoming a priest’, in which the head noun *dooki* ‘motive’ is content-taking and in which the modifying clause supplements the content. At the same time, however, the head noun *dooki* ‘motive’ could construct a sentence if inserted into the clause with the case marker *de*, just as an inner relation NMC could.

Building on Teramura’s detailed observations and insights and examining naturally-occurring NMCs, Matsumoto (e.g. 1988a, 1988b, 1989, 1991, 1996, 1997, 2007) proposed an analysis that treated NMCs as a single class and highlighted the importance of semantic and pragmatic factors in their construal and production. She argued that the construal and production of NMCs need to rely significantly on an aggregate of linguistic and non-linguistic factors involving the two main constituents that interact (Matsumoto 1996, 1997), since, unlike in English, there is no explicit structural marking that determines the specific grammatical and semantic relationship between the two main constituents of NMCs (e.g. a relative pronoun or a syntactic gap for relative clauses, or no gap for noun complement clauses). In this sense, the construal process of the construction was described as reminiscent of that of noun-noun compounds. Depending on which constituent provides the interpretive basis for the construction (i.e. the modifying clause, the noun, or both), three types of construal pattern were proposed, namely, the “Clause Host” (CH) type, the “Noun Host” (NH) type, and the “Clause and Noun Host” (CNH) type (e.g. Matsumoto 1997). The identification of the three types was not for the purpose of claiming that NMCs comprise three discrete semantic or syntactic types, but rather to highlight the continuity among the apparently different types. In that spirit, the following discussion of the Japanese clausal noun-modifying construction will refer to these types for ease of description.

Japanese NMCs may seem peculiar in contrast to the corresponding clausal noun-modifying constructions in English, but, consistent with some examples from Chinese and Korean cited by Matsumoto (1989), Comrie (e.g. 1998, 1999) observed more extensively that a number of other languages of Eurasia (e.g. Korean, Chinese, Khmer, Tamil, and Karachay-Balkar), irrespective of genetic affiliation, appear to present NMCs that share many of the properties of Japanese NMCs. Constructions of

that general type (which may differ from Japanese NMCs to a greater or lesser extent) are called general noun-modifying clause constructions (GNMCCs) (Matsumoto, Comrie and Sells 2017). The existence of GNMCCs in a broad array of languages suggests that the phenomena observed in Japanese NMCs have broad significance for general linguistic research.

In the following sections, we will discuss in more detail the notable characteristics of Japanese NMCs, contrast them with relative clause and noun complement constructions in English, and compare with corresponding constructions in some less commonly discussed languages.

## 2 Characteristics of Japanese clausal noun-modifying constructions

In this section, we describe characteristics of Japanese clausal noun-modifying constructions in terms of their structure and how they are construed.

### 2.1 Basic characteristics

The basic structure of clausal noun-modifying constructions can be schematically represented as in (1).

- (1) [[... Predicate (finite/prenominal)]Noun]

The head noun and the prenominal subordinate clause form a complex noun phrase. The modifying predicate is strictly speaking in the prenominal form, but in present day Japanese it is virtually identical to the past or non-past finite form since the prenominal form has supplanted the original finite form, except in the case of adjectival nouns (acting as predicates) in the non-past form.

The following simplified examples provide three prototypical types of semantic relations between the head noun and the modifying clause of Japanese NMCs. It is important to note that all the modifying clauses contain the same one element, the predicate, *tabeta* ‘ate’, and that the three examples are distinguished by the different head nouns, *yakitori* ‘grilled chicken pieces on skewer’, *hanasi* ‘story’, and *nokori* ‘remainder’.

- (2) [[*tabeta*] *yakitori*]  
       ate       yakitori (grilled chicken pieces on skewer)  
       ‘the yakitori (which) (X) ate’

- (3) [[*tabeta*] *hanasi*]  
 ate story  
 'the story (that) (X) ate (Y)'
- (4) [[*tabeta*] *nokori*]  
 ate remainder  
 'The remainder (from) (X's) eating (Y)'

As can be seen from the translations, example (2) corresponds to a relative clause construction in a conventional analysis of NMCs and (3) corresponds to a noun complement clause construction. Example (4) does not correspond to either a relative clause or a noun complement clause construction. (For Matsumoto (1988b, 1997), (2) is an example of the Clause Host type, (3) is a Noun Host type example, and (4) is a Clause and Noun Host type. A further description is given below. In Teramura's taxonomy, (2) is an inner relation example, while both (3) and (4) are outer relation examples.)

At least four crucial features of Japanese NMCs contrasting with those in English can be observed in these examples:

- (i) A relative clause equivalent and a noun-complement equivalent share the same basic structure, see (2) and (3).
- (ii) There is no explicit marking (e.g. a relative pronoun, a complementizer) indicating the grammatical and semantic relationship between the head noun and the modifying predicate, see (2), (3), and (4).
- (iii) The structure of the modifying clause is essentially identical to that of an independent clause, especially in terms of the argument arrays, i.e. the expression *tabeta* '( ) ate ( )' can be used as a main clause as is, see (2), (3), and (4).
- (iv) There are constructions with the same basic structure that do not correspond either to relative or to noun complement clauses, as in (4).

The first point, (i), and the fourth, (iv), show that the syntactically defined dichotomy in accounting for Japanese clausal noun modification is problematic, since the construction with the same apparent structure encompasses the conventionally separate constructions (RCCs and NCCs) as well as other types. The third point, (iii), also undermines the idea of a syntactic dichotomy between the relative clause equivalents and noun complement clause equivalents. Japanese is a language of relatively low referential density (Noonan 2003) and does not require all of the arguments of a verb to be present in a sentence. The apparent absence of an argument, therefore, is not reliable evidence for a syntactic operation, and is unrevealing as to whether the clause is a main clause or a relative clause or a noun complement clause. The second point, (ii), also confirms the impossibility of relying on an explicit indication for the interpretation, and suggests that the interpretation of the relation between the head noun and the modifying clause must be made through an interaction

of information such as the semantic properties, both specific and more general, of the modifying clause predicate as well as encyclopedic knowledge and the shared world-view.

The attested examples on which the above three examples were based are given below respectively for elaboration.

- (5) [[*nyuuyooku de tabeta*] *nihon no yakitori*] *ga saikoo*  
 New York LOC ate Japan GEN yakitori NOM best  
 ‘The Japanese yakitori (which) (X) ate in New York was the best’  
 (Title of an article, <http://news.livedoor.com/article/detail/7679220/>)
- (6) [[*tabeta*] *hanasi*]  
 ate story  
 ‘the story (that) (X) ate (Y)’  
 (Title of blogs, [http://blog.livedoor.jp/dz1005/archives/cat\\_223246.html/](http://blog.livedoor.jp/dz1005/archives/cat_223246.html/))
- (7) [[*kodomotati ga tabeta*] *nokori*] *o sutete-ita*  
 children NOM ate remainder ACC throw.away-PERF  
*no desyoo ka.*  
 NMLZ is Q  
 ‘Was it that (X) threw away the remainder (from) children(’s) eating (Y)?’  
 (City council member blog, <http://asanomieko.com/blog/blog.cgi?n=975>)

The difference between the modifying clauses in (2) and (5) is that the latter contains *nyuuyooku de* ‘in New York’, which is an adjunct expressing the location of the action. Syntactically, the arguments of the verb *tabeta* ‘ate’ are still unassigned, and, with no prior context – the example being the title of an article – there are no apparent referents assumed for the arguments.<sup>3</sup> The interpretation, then, is not determined by the existence of syntactic gaps but relies on the meaning and reader’s understanding of the head noun *nihon no yakitori* ‘Japanese yakitori’, which is understood to be a good candidate for the food that someone ‘ate in New York,’ but not a good candidate for the eater.

The next naturally-occurring example given in (6) is, in fact, identical to (3) given earlier, and is also a title with no prior context. Neither of the two open arguments for the modifying verb *tabeta* ‘ate’ is connected to the referent of the head noun *hanasi* ‘story’ in the typical interpretation of (6) since ‘story’ is semantically not a good candidate for such a role. In contrast, the semantic property of the head

<sup>3</sup> The writer may normally be the assumed actor in the context, but the article reveals that the writer is reporting someone else’s eating. This suggests that the unexpressed arguments of a predicate are not necessarily required to have definite reference.

noun allows its content to be described by the modifying clause. Therefore, the fact that someone ate something can be construed as the content of the story.

The interpretations of example (5) and (6), respectively, are relative clause and noun complement clause equivalents, while the complex NP in example (7) presents yet another type of noun-modifying construction in Japanese. The head noun *nokori* ‘remainder’ is neither an argument nor an adjunct of the modifying clause verb *tabeta* ‘ate’, and the modifying clause *kodomotati ga tabeta* ‘children ate’ does not describe the content of the head noun *nokori* ‘remainder’. However, the ‘remainder’ is reasonably understood as what ensued from the eating described in the modifying clause (considering the verb is in the past [/perfect] form denoting the completion of an action) and is closely related to the described event there. At the same time, ‘remainder’ is a relational noun (e.g. Teramura 1975–78), which refers to a concept that is established relative to another concept, and in (7) the concept relative to the remainder is expressed in the clause. The complex noun refers to the remainder that came about after children ate some food (specifically, the school lunch in this particular context), and the writer wonders whether some organization (the school district) has been throwing away such remaining food.

The examples above confirm that the presence or absence of a syntactic gap in modifying clauses in Japanese does not provide a reliable basis for postulating two separate constructions such as RCCs and NCCs. Within this single construction (i.e. GNMCC), three types of interpretation patterns have been suggested based on the roles that each main constituent plays in reaching a coherent construal of the construction (e.g. Matsumoto 1997), namely, “Clause Host” (CH) type, the “Noun Host” (NH) type, and the “Clause and Noun Host” (CNH) type.

In CH type instances, e.g. (2) and (5) above, the clause with its predicate and other elements is perceived to provide the primary information, and accordingly, the basis for a coherent construal, and in that sense it can be said to host the referent designated by the head noun. All “relative clause” instances would be subsumed under the CH type of construal.

In NH type instances, e.g. (3) and (6), on the other hand, the semantics of the head noun can be seen to license what is described in the modifying clause being understood as the content of what is designated by the head noun. In this sense, the head noun hosts the modifying clause. Instances of the NH type pattern subsume examples of the noun complement clause construction. It should be noted that not all instances with head nouns that allow NH type construal are of the NH type. For example, an NMC with the head noun *hanasi* ‘story’ may be of the CH type or may be ambiguous as to construal type if there is no determining context, as in *kiita hanasi* ‘the story that (X) heard’, or ‘the story (that) (X) heard (Y)’.

Finally, in the instances of the CNH type construal pattern, e.g. (4) and (7), the roles that the two main constituents play in construal are even more interdependent and tightly connected than the other two types in that each constituent provides the informational basis and ‘hosts’ the other. This CNH pattern of construal includes

what were considered to be problematic instances by Teramura – i.e. instances in which the head noun could take a case relation marked by *de* expressing the motive and the cause among others (belonging to the inner relation type) while the head noun, e.g. *dooki* ‘motive’, is also considered as admitting an outer relationship. These examples present no problem to the model adopted here, or rather, the point of the “problem”, in fact, represents the main characterization of the CNH type, as was described above. In addition to these cases, instances that can take the CNH type construal pattern include Teramura’s outer relation examples with what he classified as relational head nouns (e.g. *nokori* ‘remainder’), and those with head nouns of perception (e.g. *nioi* ‘smell’, *oto* ‘sound’), which were classified by Teramura (1977) as regular content-taking nouns similar to *hanasi* ‘story’, rather than as relational nouns. NMCs with perception head nouns such as (8) below are included as examples of CNH type NMCs because a perception is often characterized in relation to an event or state that is its source.

- (8) [[*sakana o yaku*] *nioi*] *ga suru*  
 fish ACC grill smell NOM there.is  
 ‘There is the smell (of) grilling fish’  
 (Teramura 1977; Matsumoto 1997)

The relational nature of *nioi* ‘smell’ may be noted from the fact that *<?>a, nioi ga suru* ‘Oh, there is a smell’ is normally not acceptable in Japanese (while the English translation may be) unless the interlocutors already share knowledge of the source of the smell (Matsumoto 1997). Thus, in (8), the modifying clause specifies the source of the smell, which may be viewed as the base for the relational term. On the other hand, the smell can be viewed as the consequence or product of the event described in the modifying clause; in that sense the modifying clause *sakana o yaku* ‘grill(ing) fish’ forms the base relative to which *nioi* ‘smell’ is understood.

It should be emphasized that these three types present possible construal patterns observed in the single construction of Japanese NMCs and are not intended as definitive or discrete categories. A more refined analysis of the construal process should be possible as more detailed analyses become available through research such as FrameNet (Fillmore and Baker 2009). At the present stage, however, this tripartite classification can be used a starting point for comparing a wide range of clausal noun modification across various languages.

## 2.2 Further characteristics

A much debated issue in syntax is the existence and significance of island constraints, i.e. constraints on the extractability of an embedded noun. Japanese, unlike English, is largely understood as not following island constraints in general. There



are, however, situations in which the extractability of a noun from a complex NP has been argued to illustrate such features as subject/non-subject asymmetry; i.e., the extraction out of an NP in subject position is allowed, while the extraction out of an NP in non-subject position is not (Hasegawa 1981; Saiki 1986). The posited extraction rule, however, is subject to counterexamples, such as (9) below.<sup>4</sup> As can be observed in the contrast between (9a) and the “non-relative” equivalent (9b), the gap in the NP is in the indirect object position, not the subject position.

- (9) a. [[[[*watasi ga okutta*] *o-tyuugen*] *ga kowarete-ita*]  
           I           NOM sent   HON-summer.gift NOM broken-was  
           *tokuisaki*] *ga aru n desu ga...*  
           client    NOM exist NMLZ COP but  
           lit. ‘There is a [client [(to whom) the summer gift [(which) I sent  
           [was broken]]]], but...’
- b. [[*watasi ga tokuisaki ni okutta*] *o-tyuugen*] *ga kowarete-ita*.  
           I           NOM client    DAT sent   HON-summer.gift NOM broken-was  
           lit. ‘The summer gift (which) I sent to a client was broken.’  
           (Matsumoto 1989: 229, 1997: 100–101)

One of the crucial reasons why extraction from an indirect object position in this example is acceptable can be attributed to the aggregate of contextual and cultural knowledge accessed in the comprehension and production of Japanese NMCs. The situation called to mind in the above example is easily imaginable to those who are familiar with the Japanese custom of sending summer gifts to acquaintances and clients. The knowledge about the valency of the embedded verb, and the semantic and cultural information associated with the lexical items overcome the barrier to comprehension that is posed by the structural complexity. The primacy of context and general knowledge is more clearly observable in Japanese than, say, in English, since the construction of clausal noun modification in Japanese generally relies much more on extra-syntactic information than in English. In passing, however, the importance of pragmatic and cognitive factors has also become a topic in English (Hofmeister and Sag 2010). We do not elaborate here, but points similar to that made above in relation to (9a) can be said about the issue of “island constraints” regarding Japanese NMCs that fall under other construal types (NH type and CNH

<sup>4</sup> This example is based on a naturally-occurring utterance, but is slightly modified to avoid possible complexity that might arise in the gloss and the explanation, although the basic structure is not affected. In the original utterance, *watasi* ‘I’ in the most embedded clause was absent, the verb *okutta* ‘sent’ was in the humble (non-subject honorific) form *o-okurisita* ‘HON-sent.POLITE’, and the head noun *tokuisaki* ‘client’ was given with an honorific prefix *o-* to be *o-tokuisaki*. This utterance was addressed to a department store clerk by a customer, who had the summer gift sent to the client from the department store.

type), but this is not surprising, considering that they are subtypes of one construction (Matsumoto 2017).

The significance of semantic and pragmatic information that construers employ possibly more than syntactic information is also illustrated by the examples below. In these examples, the preferred interpretations differ from what would be expected from the standard hierarchy of arguments and adjuncts of predicates but conform to the general encyclopedic real-world knowledge, or shared “world-view” of the interlocutors (also see Matsumoto 1997).

The preferred interpretation of (10) is presented in (10a), in which the head noun *katei-kyoosi* ‘tutor’ is associated with an adjunct of the subordinate predicate *ukaru* ‘pass’, and not with the subject. In the preferred reading, the head noun in this example points to the condition for what is expressed in the modifying clause (similarly to the example *atama no yoku-naru hon* ‘the book (by reading which) (X’s) head gets better’), while real-world knowledge selects (10a) since a tutor is commonly sought and hired to assist someone to pass a high school entrance exam, rather than someone who has to pass such an exam. It is likely that (10b) would not be even considered as a possible meaning of (10) among people who are aware of current educational practice.

- (10) [[*kookoo nyuusi ni zettai ukaru*]  
 high.school entrance.examination DAT absolutely pass  
*katei-kyoosi*] *o sagasite-imasu*.  
 tutor ACC searching.for-PROG

(10a) Preferred: ‘(I) am searching for a tutor (with whose assistance) (X) can pass the high school entrance exam.’

(10b) ?? ‘(I) am searching for a tutor (who) can pass the high school entrance exam.’

(Matsumoto 1997: 95)

Example (11) emphasizes this point in contrast to the English counterpart given in the translation. The English version has one indisputable interpretation, in which the tomato is the eater and Tokyo is the food. Given this syntactically imposed interpretation, the construer is invited to imagine a world in which these conditions are satisfied, e.g. a fantasy. In contrast, as we observed, Japanese needs to be guided by real-world plausibility to find the cohesion between the two main constituents in the absence of explicit marking. Example (11) would not easily be comprehended since no pragmatically plausible interpretation is tenable despite the clear absence of the subject in the clause. (For more detail, see Matsumoto 1997: 83–4.)

- (11) ??[[*tookyoo o tabeta*] *tomato*]  
 Tokyo ACC ate tomato  
 Marginally: ?? ‘the tomato that ate Tokyo’  
 (Matsumoto 1997: 83)

There are numerous additional examples that illustrate the prominence of semantic and pragmatic factors in accounting for Japanese NMCs, but we now turn our attention to another notable feature of Japanese NMCs, namely, the extensiveness of relations available between the two main constituents and of possible interpretations.

## 2.3 Extensive semantic relations and interpretations

One of the factors contributing to the perceived ubiquity of NMCs in Japanese is the fact that various forms of clausal noun modification can be expressed by a single structure. For example, English expressions such as *things to consider*, *the sight of children playing hopscotch*, *chopped garlic*, as well as *the sentence I am writing now* all correspond to a single form in Japanese, i.e. a head noun modified by a clause in finite (adnominal) form. Another factor is the extensive semantic relationships that are possible between the modifying clause and the head noun. As we briefly observed in section 1, a CH type NMC is possible even when the head noun is not in a case relation with the modifying predicate. This condition allows possible relations between the two main constituents to be more extensive than would be allowed for relative clauses. The extensiveness may be explained by the resemblance to innovative (i.e. non-conventionalized) noun-noun compounds in English, which allow a multitude of relations (Downing 1977).

It should be emphasized, however, that Japanese NMCs and Japanese equivalents to innovative noun-noun compounds (noun *no* noun) are not identical in constructibility. For example, *sakana no menyuu* ‘the fish menu’ is a possible innovative noun-noun compound in Japanese whereas the NMC *<??>sakana o yaku menyuu* ‘the menu (from/for/of/...) grilling fish’ is hardly comprehensible, presumably because the semantic and real-world information provided in the modifying clause does not support a close association with a menu.<sup>5</sup> As this example and (11) indicate, despite the extensive available relations, there are definitely semantic and pragmatic constraints on acceptability.

NMCs in Japanese of the NH type also present a wider variety than is regularly possible in English examples of clauses that complement nouns. To illustrate the wide range of interpretations that can be expressed by NMCs, some Japanese examples of commonly found relations are presented below. These attested examples are taken from Matsumoto (1997).<sup>6</sup> What appears within the angled brackets in (12)–(20) indicates a semantic role (or a frame element) that the referent of the head noun plays in the state or the event described in the modifying clause.

<sup>5</sup> A predicate-based diagnosis of possible relations is proposed in Matsumoto (1997), and more cognitively based conditions are also discussed in Matsumoto (2007). Further studies on cognition are necessary to provide a definitive answer.

<sup>6</sup> The source type for each example is marked by one of the following list of notations: (O) denotes an example from oral data, (W:T) denotes an example from written data, in particular, a title of an article, book, etc., similarly (W:F) denotes written data from fiction, (W:L) written data from a letter, and (W:N) written data from a newspaper article.

## CH-type NMC

- (12) [[*yaburu*] *kyozin*] <Core Participant (argument)> (W:N)  
 beat the.Giants (Tokyo-based baseball team)  
 ‘the Giants, (who) will beat (every team)’ (used in newspaper title, Tokyo edition)  
 ‘the Giants, (whom) (our home team) will beat’ (used in the Osaka edition)
- (13) [[*suupu no okawari no dekita*] <Location> (W:L)  
 soup GEN second.serving NOM can.do  
*mise*] *nado omoidasi*  
 store etc. remember  
 ‘(I) was remembering [the store [(at which) (we) could have seconds of soup]]....’
- (14) [[*atama no yoku-naru*] *hon*] <Condition> (W:T)  
 head NOM good-become book  
 ‘[the book [(by reading which) (X’s) head gets better (i.e. X becomes more intelligent)]]’
- (15) [[*hon’yakushita*] *o-kane*], *zenbu tabe-tyatta no?* <Consequence> (O)  
 translated HON-money all eaten-have Q  
 ‘Have you eaten your way through all the money (which you earned by) (your) having translated (X)?’
- (16) [[*hutoranai*] *okasi*] *wa nai kasira* <Reverse Condition> (O)  
 gain.weight.not sweets TOP exist.not I.wonder  
 ‘I wonder if there aren’t any [sweets [(even though (X) eats which) (X) doesn’t gain weight]].’
- (17) [[*simekiri ni maniawasu*] *hayai hituryoku*] <Requisite> (W:N)  
 deadline TIME make.it.meet fast the.power.of.the.pen  
 ‘the brisk writing (which is necessary for) (X) to meet the deadline’
- (18) [[*te o araw-anakute ii*] *oyatu*] *nai?* <Purpose> (O)  
 hand ACC wash-not.GER okay snack exist.not  
 ‘Isn’t there a snack (in order to eat which) (X) doesn’t have to wash hands?’
- (19) [[*go-hun-kan de suzi ga ieru*] <Whole> (W:N)  
 five-minutes-period by plot NOM can.tell  
*kabuki*] *wa kirai*.  
 kabuki TOP dislike  
 ‘(I) dislike a kabuki play (whose) plot can be told in five minutes’

- (20) [[*nuimono o suru*] *te*] *mo yasume-nai*. <Part> (W:F)  
 sewing ACC do hand even rest-not  
 ‘(She) does not rest even (her) hand (with which she) is sewing.’

## NH-type NMC

### Content and Nouns of Communication as Head

- (21) [[*toonyoo ga akka-site gan ni natta*] (W:F)  
 diabetes NOM aggravate-did cancer DAT become  
*hanasi] nado tuizo kiita koto ga nai*.  
 story such.as ever heard NMLZ NOM not.exist  
 ‘(I) have never heard of a story (that/in which) diabetes became aggravated to become a cancer.’

- (22) [[“*kawa de asoboo*” *toyuu*]<sup>7</sup> *seito no koe*] *de...* (W:N)  
 river LOC play;VOL QT.say [COMP] pupil GEN voice by  
 ‘(Inspired) by the pupils’ voices (saying) “Let’s play in the river”...’

### Content and Nouns of Thoughts and Feeling as Head

- (23) ... [[*zibun o miru*] *omoi*] *de...* (W:L)  
 self ACC see thought with  
 ‘... with the feeling of seeing herself...’

### Content and Other Content-Taking Nouns as Head

- (24) ... [[*atama o tataku*] *kuse*] *ga aru...* (O)  
 head ACC hit habit NOM exist  
 ‘... have the habit of hitting (my) head...’
- (25) [[*kokoro atatamaru*] *kekka*] *ni sita no mo uresii*. (W:N)  
 heart to.warm result DAT made NMLZ also happy  
 ‘(I)’m also pleased (that) (X) made a result (i.e. the ending) that the heart warms.’

## CNH-type NMC

### Relational Nouns as Head

- (26) *sorede, kono, [sippai-sita] gen’in*] *wa da na...* (O)  
 and this fail-did cause TOP is SFP  
 ‘and, this, the cause for (X’s) having failed is...’

<sup>7</sup> See Matsumoto (1998) regarding the use of *toyuu*.

- (27) *Masako wa [[kaimono ni deta] kaeri] ni ...* (W:F)  
 Masako TOP shopping GOAL went return TIME  
 ‘Masako, on the way back (from) going shopping ...’

#### Quasi-Relational Nouns as Head

- (28) *[[hon o katta] oturi]*  
 book ACC bought change  
 ‘the change (from) buying a book’
- (29) *[[“sinzyuu-si-sokoneta] ato”] to, ...* (W:F)  
 love.suicide-do-failed mark/trace QT  
 ‘(Saying “(this is) the mark (which was made when) (I) failed (in a) love-suicide, ...”

#### Nouns of Perception as Head

- (30) *[[sakana o yaku] nioi] ga suru*  
 fish ACC grill smell NOM there.is  
 ‘There is the smell (of) grilling fish.’

### 3 A typological perspective

As presented in section 2, Japanese and English differ on a number of parameters with respect to clauses that modify head nouns. The crucial differences can be summarized as in (31).

- (31) a. English makes a strict distinction between relative clauses and other constructions, while Japanese has a single NMC construction.
- b. One of the features that characterizes English relative clause constructions is that they include a gap, i.e. as main clauses they would be incomplete; by contrast, Japanese NMCs have the basic structure of well-formed main clauses, in particular with regard to the lack of need to express arguments overtly.
- c. Since English relative clauses include a gap, there is the possibility of syntactic constraints on the relationship between that gap and the head noun to which it corresponds, what are often referred to as “constraints on extractability”.
- d. In examples with a relative clause interpretation, Japanese does not indicate the role of the notional head noun within the NMC, as can be seen clearly in potentially ambiguous examples such as (12); in English the role is indicated explicitly by the gap, sometimes also by a relative pronoun governed by a preposition, as in *the knife with which I cut the bread*.

This might suggest a clear dichotomy among the world's actual languages between those like English, which would have distinct relative clauses with gaps and the possibility of syntactic constraints on extractability, versus those like Japanese, which would have a single GNMCC, no gap, and therefore no possibility of syntactic constraints on extraction (although there might be semantic and/or pragmatic constraints on construability, as noted in sections 2.2 and 2.3).

It is worth clarifying two of the points made in (31). First, with respect to the expression of arguments, what is essential for the Japanese type is that the overt expression of arguments is the same in main clauses as in noun-modifying clauses, while for the English type arguments that must be expressed overtly in main clauses may be missing in relative clauses. Since Japanese is a language with low referential density, the “no gap” requirement corresponds literally to the occurrence of nothing in the modifying clause. Another possibility, however, would be for both main clause and modifying clause, as in example (32) from the East Caucasian (Nakh-Dagestanian) language Hinuq, where the argument of the postposition *cadaq* ‘together with’, which would have been filled by a full noun phrase in a main clause, is expressed by means of a pronoun.<sup>8</sup>

- (32) [zon-de            cadaq    de Ø-exna:-ho    goɬ-a]    hudul  
 REFL.SG-ALOC together me I-go-IPFVCVB be-PTCP friend  
 ‘the friend with whom I went’

Second, the fact that English has gaps means that it is possible for there to be syntactic constraints on extraction, but it does not actually require that there should be such constraints. Nor, more specifically, does it specify what these constraints should be, and indeed languages that follow English in having gaps and syntactic constraints on them differ as to what these syntactic constraints are. Thus, (31c) has a slightly different status from the other parameters in (31), since the parameter value “having syntactic constraints” unequivocally assigns a language to the English type, but the parameter value “lacking syntactic constraints” does not necessarily assign a language to the Japanese type.

An initial hypothesis, especially given the fact that the different parameters in (31) are clearly related to one another, even though they are logically independent, would be that any given language must either belong to the English type or belong to the Japanese type, i.e. that the logically independent parameters of (31) nonetheless correlate highly. A major aim of the present section is to provide some initial investigation of this claim; for further details, reference should be made to Matsumoto, Comrie and Sells (2017).

Comrie (e.g. 1998) observed that a number of other languages provide *prima facie* evidence in favor of assigning them to the Japanese type, especially with respect to

<sup>8</sup> The Hinuq pronoun glossed as REFL, i.e. reflexive, is not clause-bound, much like Japanese *zibun*.

(31a) and (31d); for (31c), in particular, many grammars fail to provide information on syntactic constraints on extraction, so further investigation would be necessary.<sup>9</sup> Examples (33)–(37) are from Tamil, and are based on Lehmann (1993: 284–294).

- (33) [*kumaar-aik kaṭi-tt-a*]      *naay*  
 Kumar-ACC bite-PST-PTCP dog  
 ‘the dog which bit Kumar’
- (34) [*oru naay kaṭi-tt-a*]      *paiyaṇ*  
 a dog bite-PST-PTCP boy  
 ‘the boy whom a dog bit’
- (35) [*kumaar katav-aip puuṭṭ-iy-a*]      *caavi*  
 Kumar door-ACC lock-PST-PTCP key  
 ‘the key with which Kumar locked the door’
- (36) [*oru mantiri varu-kir-a*]      *anta vatanti*  
 a minister come-PRS-PTCP that rumor  
 ‘the rumor that a minister would come’
- (37) [*naaṇ kiṭṭee viṭu-nt-a*]      *kaayam*  
 I down fall-PST-PTCP wound  
 ‘the wound from my falling down’

All the noun-modifying clauses in (33)–(37) have the same basic structure, and with appropriate changes to the verb morphology (replacement of the participle by a finite form) could serve as main clauses. Examples (33)–(35) receive a relative clause interpretation, and there is no overt indication of the role of the notional head noun in the relative clause. Example (36) receives a noun complement interpretation, while (37) receives neither of these interpretations, i.e. the range identified for Japanese in section 2.1 is also found in Tamil.

However, in order to establish the precise typological positioning of various other languages with respect to the English and Japanese types defined in (31), it is necessary to undertake much more detailed analyses of the individual languages involved. A first step in this direction is the project “Noun-Modifying Constructions in Languages of Eurasia: Rethinking theoretical and geographical boundaries”, supported by Stanford University’s Presidential Fund for Innovation in the Humanities and leading to the publication Matsumoto, Comrie and Sells (2017). The detailed

<sup>9</sup> Lehmann (1993) does discuss constraints on relative clause formation, but it is not clear to what extent these are syntactic rather than semantic or pragmatic.



work on a number of languages of Eurasia has led to a sharpening of our understanding of the crosslinguistic variation with respect to the parameters set out in (31), including in extreme cases removing apparent instances of Japanese-type languages out of that category altogether (e.g. Ainu; see Bugaeva 2017).

In the remainder of this section, we will look at one language in particular, Hinuq, to see how it matches up against the parameters in (31). Hinuq is a member of the Tsezic branch of the Nakh-Daghestanian (East Caucasian) family and is spoken in the west of the Republic of Daghestan, a constituent part of the Russian Federation located in the North Caucasus. The summary here is based on Comrie, Forker and Khalilova (2017).

In Hinuq, noun-modifying clauses precede their heads, and the main verb in the noun-modifying construction stands in a participial form, in contrast to the finite form found in the corresponding main clause, but otherwise the structure of main clauses and noun-modifying clauses is essentially the same. Like Japanese, Hinuq has low overall referential density, so that while there is usually no overt reference within a noun-modifying clause with a relative clause interpretation to the notional head, there is no reason to posit an actual “gap”. As in Japanese, with the relative clause interpretation there is no difference depending on the position relativized, as can be seen in (38)–(40), which show respectively relativizing a subject/agent, a direct object/patient, and an instrument.

- (38) [*xok'o-be*    *r-u:-ho*                      *got-a*]    *ked*  
 khinkal-PL NHPL-make-IPFVCVB be-PTCP girl  
 ‘the girl who made khinkal (a kind of flour dumpling)’

- (39) [*ked-i*    *r-u:-ho*                      *got-a*]    *xok'o-be*  
 girl-ERG NHPL-make-IPFVCVB be-PTCP khinkal-PL  
 ‘the khinkal that the girl made’

- (40) [*obu-y*    *ažey*    *y-occo*                      *got-a*]    *og*  
 father-ERG tree(IV) IV-cut-IPFVCVB be-PTCP ax  
 ‘the ax with which the father cut the tree’

(As illustrated in (32), Hinuq sometimes has a pronoun in the position relativized. This may involve interaction with other features of the language, e.g. the impossibility of stranding postpositions, and also the use of a more explicit strategy where the intended interpretation is more difficult to access for reasons of semantics, pragmatics, and/or processing. Arguably, it does not involve independent syntactic conditioning. Such “pronoun retention” is also possible, though rare, in Japanese.) The same construction is readily used as the translation equivalent of an English sentential complement of a head noun, as in (41).

- (41) [*Madina-y uži Ø-u:-ho goł-a*] *xabar*  
 Madina-ERG son(I) I-make-IPFVCVB be-PTCP news/story  
 ‘the news/story that Madina gave birth to a son’

Finally, Hinuq has GNMCCs that receive neither a relative clause nor a complement clause interpretation, as in (42).

- (42) [*magalu b-eša:-ho goł-a*] *mañ*  
 bread III-bake-IPFVCVB be-PTCP smell  
 ‘the smell of bread baking’

So far, Hinuq would seem to of the pure Japanese type.

However, despite many attempts working with the East Caucasian languages Hinuq and Bezhta, we have not succeeded in creating a single reliably acceptable example of relativizing a constituent that is already in a GNMCC with a relative clause interpretation, parallel to Japanese example (9a), and this despite building up rich contexts in which the intended interpretation should be clear.<sup>10</sup> Moreover, we have not succeeded in constructing any non-syntactic account of why this should be so, i.e. the examples we intended do not seem to be semantically or pragmatically excluded, indeed quite the opposite: Given the contexts we provided, the examples would have been readily interpretable, if acceptable.

Moreover, in a number of cases where one might expect to find a GNMCC, Hinuq prefers or even requires a different construction, in particular with examples that are interpreted as clausal complements of head nouns. Thus, as a translation of ‘the intention to go home’, the GNMCC (43a) is rejected, while (43b), with an infinitive as complement of the head noun as of a head verb, is readily accepted.

- (43) a. \*[*de idu-do Ø-iłi-yo goł-a*] *pikru*  
 me home-DIR I-go- IPFVCVB be-PTCP thought  
 b. [*idu-do Ø-ił-a*] *pikru*  
 home-DIR I-go-INF thought  
 ‘the thought/intention to go home’

Here we can perhaps at least offer a partial explanation. For the expression of clausal complements of head nouns, Hinuq has two available constructions, GNMCCs and regular complementation strategies such as the infinitive. There are thus two constructions in competition. Sometimes the GNMCC wins out, as in (42). But sometimes, as

<sup>10</sup> Note, however, that Hinuq does allow relativizing out of adverbial clauses (e.g. literally ‘the film that, whenever I watch [it], I cry’), and out of complement clauses (e.g. literally ‘the dress that you forgot that mother didn’t buy’, both without resumptive pronouns in Hinuq).

seems general with expressions of desire and intention, it is the regular complementation strategy that wins out. But this is only a partial explanation; in particular, it does not explain why (43a) and (43b) are not both acceptable, i.e. why (43a) is unacceptable.

The general picture that is emerging from the more detailed investigation of languages that *prima facie* seem to have Japanese-like GNMCCs is that in these other languages, the range of the GNMCC is more constrained than in Japanese. This is unexpected given the logical coherence of the parameters in (31), but is not unusual in typological work. Quite often, one sets up two opposite typological poles, frequently on the basis of an initial pair of languages that really do show such starkly different behavior, only to find that other languages do not consistently place themselves at one or the other pole, but rather occupy various intermediate positions.

Although we have concentrated so far in this section on structural differences between Japanese and Hinuq, it is also worth noting an important discourse difference. In Japanese, as noted in section 2, GNMCCs are very frequent in natural discourse. By contrast, in Hinuq they are rare. All of the examples given above are elicited, and while we do have examples from natural discourse – they are not used here because they involve structures that are in other respects quite complex and would require extensive commentary – this is certainly not a “ubiquitous” construction as in Japanese. Conceivably the extensive use of GNMCCs in Japanese has enabled them to develop to their fullest extent, while this has not been the case, for instance, in Hinuq, where competing constructions as in (43) can block the acceptability of a GNMCC.

So there are languages that tend towards the Japanese end of the spectrum but without reaching the extreme position that Japanese occupies. One might ask about the other pole: Are there languages that approach the English end of the spectrum without being quite so extreme? The answer is “yes”, and one such language is, surprisingly – English, or at least some varieties of English. As noted by Matsumoto (1989) and Comrie (1999), on the periphery of standard English one finds attested examples like (44), where the subordinate clause contains no gap although it clearly identifies the kind of group that is involved, and thus matches Japanese examples such as (4).

(44) *You come to a group [that you have to eat certain foods].*

Moreover, when the interpretation is transparent, one sometimes finds acceptable instances of violations of constraints on extraction in English, as in (45).

(45) *You choose some languages that you know and some languages [that you have friends [who know]].*

The last relative clause *some languages that you have friends who know* would relate to the main clause (46), in which *languages* is already within a relative clause, and

therefore by the general constraints on extraction should not be accessible to relative clause formation in English.

(46) *You have some friends [who know the languages].*

The explanation for examples like (44) and (45) is not obvious, but plausibly involves semantic and pragmatic transparency leading to the acceptability of otherwise valid syntactic constraints.

## 4 Conclusions

Japanese has a single GNMCC (general noun-modifying construction) that corresponds to a range of different constructions in English, including but not restricted to relative clauses and clausal complements of head nouns. The recognition of GNMCCs in Japanese leads to a unified elegant description of a range of phenomena that would otherwise be scattered piecemeal and without any resulting gain across the grammar of the language. In this respect, Japanese differs radically from English, where relative clauses are a distinct construction, with a number of repercussions for other differences between the two languages: English relative clauses have a syntactic gap, which leads to syntactic constraints on the extraction of elements, while Japanese lacks both gaps and syntactic constraints on extraction in GNMCCs, including those whose English translation equivalents are relative clauses. Some other languages follow Japanese in general on these parameters, but nonetheless show interesting differences whose motivation remains a topic for future investigation.

## Additional abbreviations

ALOC – animate locative; DIR – directional; IPFVCVB – imperfective converb;  
NHPL – nonhuman plural

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Nobuko Yoneda

## 14 Noun-modifying constructions in Swahili and Japanese

### 1 Introduction

This chapter provides a comprehensive description of clausal noun-modifying constructions in Swahili, a Bantu language spoken in East Africa, and contrasts them with their functional equivalents in Japanese. Two types of noun-modifying construction are found in Swahili, which is basically an SVO language: one marked with the overt complementizer *amba*<sup>1</sup> (the “*amba* construction”) and the other without it (the “*amba*-less construction”). There are some well-known restrictions that apply only to *amba*-less constructions: only a limited range of subject markers and tense/aspect markers can be used in the modifying clause, and the verb must be placed immediately after the head noun. It has generally been accepted that these restrictions are the major characteristics of *amba*-less constructions that essentially distinguish them from *amba* constructions (Ashton 1947; Polomé 1967; Schadeberg 1989, 1992; Nakajima 2000, among many others). While this is basically correct, there is another important difference between *amba* constructions and *amba*-less constructions that previous studies have not mentioned: the relation between the head noun and the modifying clause.

Teramura’s (1975, 1977) binary classification of *uchi no kankei* “inner relation” and *soto no kankei* “outer relation” has been applied to many studies of noun-modifying clauses in Japanese (Katō 2003; Horie and Pardeshi 2009; Ōshima 2010; Masuoka 2010, among others). This binary classification is transparently reflected in noun-modifying constructions in Swahili. I will apply the classification based on these Japanese studies to noun-modifying constructions in Swahili, clarifying the differences between the *amba* and *amba*-less constructions; then, I will discuss similarities and differences between these two constructions and Japanese noun-modifying constructions.

This chapter will be the first attempt at a contrastive study of noun-modifying constructions in Japanese and Swahili. While previous contrastive studies involving Japanese have undoubtedly contributed to the linguistics of both Japanese and other languages, most of them are limited to comparison of Japanese with Western or Asian languages. In fact, very few comparisons have been done with African languages, even the most studied African language, Swahili. From the Swahili side, too, nearly all contrastive studies have involved comparison with Western languages.

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<sup>1</sup> This complementizer *amba* is derived from a verb meaning ‘to say’. The verb form is in use nowadays only in *ambia* ‘to tell (someone)’, an applicative derivational form of *amba*.

This applies not only to contrastive studies but to the bulk of studies of all kinds of African languages, where a Western-linguistic point of view is predominant and the insights of Japanese linguistics have never been applied. Therefore, the contrastive study of Japanese and Swahili, which is a completely new research area, has huge potential to contribute to both Japanese and Swahili linguistics.

## 2 Relation between the head noun and the modifying clause

Before discussing noun-modifying constructions in Swahili, I will explain what Teramura's "inner relation" and the "outer relation" are with reference to Japanese examples. The inner relation is a relation in which the head noun is implicitly part of the modifying clause. For example, the head noun *otoko* 'man' in (1a) is the subject of the modifying clause *kuruma o katta* 'bought a car', and *kuruma* 'car' in (1b) is the object of the modifying clause *otoko ga katta* 'the man bought'. The head nouns of both (1a) and (1b) have an inner relation with the verb *kat-ta* 'bought', because they correspond to the subject and the object of the transitive sentence in (1c).

- (1) a. *kuruma o kat-ta otoko*  
       car       ACC buy-PST man  
       'the man who bought a car'
- b. *otoko ga kat-ta kuruma*  
       man    NOM buy-PST car  
       'the car that the man bought'
- c. *Otoko ga kuruma o kat-ta.*  
       man    NOM car       ACC buy-PST  
       'A/the man bought a car.'

It is not necessary for nouns exhibiting an inner relation to be core arguments of the modifying clause; adjuncts such as instrumental and locative phrases are also "part of the modifying clause". Therefore, *ami* 'grate' in (2a) and *daidokoro* 'kitchen' in (3a) are also in an inner relation with the modifying clause, since they can be inserted into it as shown in (2b) and (3b).

- (2) a. *Otoko ga sakana o yai-ta ami*  
       man    NOM fish       ACC grill-PST grate  
       'the grate with which the man grilled fish'
- b. *Otoko ga ami de sakana o yai-ta.*  
       man    NOM grate INS fish       ACC grill-PST  
       'A man grilled fish with a grate.'



- (3) a. *Otoko ga sakana o yai-ta daidokoro*  
 man NOM fish ACC grill-PST kitchen  
 ‘the kitchen where the man grilled fish’
- b. *Otoko ga daidokoro de sakana o yai-ta.*  
 man NOM kitchen LOC fish ACC grill-PST  
 ‘A man grilled fish in the kitchen.’

When there is no inner relation between the head noun and the modifying clause, that is, when the head noun cannot be inserted in the modifying clause, this is called the “outer relation.” According to Matsumoto (1997: 33), the main difference between inner and outer relations is characterized as follows: The inner relation is one in which the head noun can be inserted into the modifying clause to compose a sentence, whereas the outer relation is one in which the clause supplements the content of the meaning designated by the head noun.

The outer relation in Japanese involves diverse semantic relations. One is the “appositive” relation,<sup>2</sup> as exemplified in (4), where the head noun *hanasi* ‘story’ represents the content of the story in question.

- (4) appositive outer relation  
*otokonoko ga momo kara detekuru hanasi*  
 boy NOM peach from come.out story  
 ‘the story that a boy comes out of a peach’

Another case is a causal relation, as shown in (5) below.

- (5) causal outer relation  
*dareka ga sakana o yaku nioi*  
 someone NOM fish ACC grill smell  
 ‘the smell of a fish being grilled’

Example (5) does not belong to either the inner relation or the appositive relation. The head noun *nioi* ‘smell’ cannot be inserted into the modifying clause ‘someone is grilling a fish’, nor can ‘someone is grilling a fish’ be construed as representing the content of ‘smell’. Instead, the modifying clause ‘someone is grilling a fish’ here represents the event which produces the ‘smell’. Therefore, the relation between the head noun and the modifying clause is one of “cause and effect,” and I will call this the “causal” relation.

<sup>2</sup> This relation is referred to by various terms in Japanese linguistics (e.g., “propositional content” (Katō 2003), “noun complement” (Horie and Pardeshi 2009; Matsumoto and Comrie this volume), “propositional supplement” (Ōshima 2010), “content supplement” (Masuoka 2010)).

The overall structure of inner and outer relations can thus be summarized as follows:

- Inner relation: The head noun can be inserted as part of the modifying clause.
- Outer relation: The head noun cannot be inserted as part of the modifying clause.
  - appositive (The modifying clause expresses the content of the head noun)
  - causal<sup>3</sup> (There is a logical relation of causality between the head noun and the modifying clause)

This section has reviewed the two major classes of Japanese noun-modifying constructions in which a finite clause directly modifies a head noun. Superficially, both these constructions look alike, because Japanese deploys a simple concatenation of a finite clause and a noun without the mediation of a relative pronoun or a complementizer. As seen from the English translations provided for the Japanese examples above, only inner relation noun-modifying clauses qualify as “relative clause constructions” (Horie and Pardeshi 2009; Masuoka 2010); both this relation and outer noun modification in the appositive relation are common among the world’s languages. This leaves us with the outer relation of causality as a property peculiar to Japanese and a limited number of other languages, such as Korean, Khmer (Horie and Pardeshi 2009), and Marathi (Hook and Pardeshi 2013). The languages listed above are Asian languages; however, a similar construction can also be observed in an African language, Swahili.

### 3 Two types of noun-modifying constructions in Swahili

In Swahili, noun-modifying clauses are marked with a relative marker (RM) that agrees with the head noun, and two types of noun-modifying clause (*amba* and *amba*-less) are distinguished according to where the RM is attached (Ashton 1947; Polomé 1967; Schadeberg 1989, 1992; Nakajima 2000, among others). The *amba*

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<sup>3</sup> Masuoka (2010) divides outer relations other than the appositive into two semi-categories, “causal” and “relative positional/temporal.”

(i) *kanozyo to at-ta yokuzitu* (Masuoka 2010)  
       3SG with meet-PST next.day  
       ‘next day of having met her’

The relation that can be seen here is one in which the modifying clause is the reference point of the head noun *yokuzitu* ‘next day’, which is deictic and expresses relative time. In this chapter, however, I will take up only causality as an example of the non-appositive outer relation because it is the clearest and most typical example of the outer relation, and it is the only relation which the Swahili *amba* construction can modify in non-appositive outer relation.

construction has an overt complementizer *amba*, to which the RM is suffixed; in contrast, the *amba*-less construction does not have an overt complementizer, and the RM is prefixed to the verb. These constructions can be schematized as follows:

A. *amba* construction (□ = verb)

head noun + *amba*-**RM** + (subject noun +) (NEG-) SM- TAM- (OM-) STEM

B. *amba*-less construction<sup>4</sup>

head noun + SM – TAM – **RM** – (OM-) STEM (+ subject noun)

(6) ‘the teacher who gave me a book’

a. *amba* construction

***mwalimu***   *amba-ye*   *a-li-ni-pa*   *kitabu*  
1.teacher<sup>5</sup>   *amba*-RM1   SM1-PST-OM1SG-give;F   7.book

b. *amba*-less construction

***mwalimu***   *a-li-ye-ni-pa*   *kitabu*  
1.teacher   SM1-PST-RM1-OM1SG-give;F   7.book

Swahili verbs (the parts in □ in A and B above) are constructed using a verb stem and different kinds of affixes. The subject marker (SM) and the object marker (OM) are added, and must agree with the subject and object, respectively. The tense/aspect marker (TAM) is the prefix that indicates the tense and aspect of the verb. The RM in (6) is *ye*, suffixed to *amba*- in the *amba* construction (6a) but placed after the TAM within the verb in the *amba*-less construction (6b).

*Amba*-less constructions have some restrictions. First, the TAMs that can be used in *amba*-less constructions are limited to present (*na*-), past (*li*-), future (*ta(ka)*-<sup>6</sup>) and tenseless negative (*si*-). Thus, for example, the *amba*-less construction cannot be used in the perfect (*me*-), as shown in (7b).

<sup>4</sup> The *amba*-less construction has a variation in which the RM is suffixed (that is, placed after the stem).

head noun + SM – (OM-) STEM-**RM**

It is used when the modifying clause conveys a timeless event, such as a daily custom or a universal condition.

<sup>5</sup> Like other Bantu languages, Swahili has a system of noun classification and agreement. All nouns in Swahili are classified into 16 different groups, called noun classes. Each noun class is identified by its characteristic prefix, and governs a set of agreement prefixes attached to nominal modifiers and verbs. In the examples, a noun is preceded by the number that indicates its noun class. The numbering of the noun classes follows the traditional system of comparative Bantu study.

<sup>6</sup> The future TAM is *ta*-; however, it normally appears as *taka*- when followed by the RM.

- (7) 'a shirt which has been torn'
- me-*
- : perfect TAM

- a. ***shati*** *amba-lo* *li-me*-chanik-a *amba* construction  
 5.shirt amba-RM5 SM5-PRF-be.torn-F
- b. \****shati*** *li-me*-lo-chanik-a \**amba*-less construction  
 5.shirt SM5-PRF-RM5-be.torn-F

Second, negative prefixes other than the tenseless negative *si-* cannot be used in *amba*-less constructions, so the *amba* construction is required when the modifying clause has a negative prefix, as shown in (8).

- (8) 'the bags that we will NOT use tomorrow'

- a. ***mikoba*** *amba-yo* *ha-tu-ta-tumi-a* *kesho*  
 4.bags amba-RM4 NEG-SM1PL-FUT-use-F tomorrow
- b. \****mikoba*** *ha-tu-ta(ka)-yo-tumi-a* *kesho*  
 4.bags NEG-SM1PL-FUT-RM4-use-F tomorrow

Third, in *amba*-less constructions, the verb must be placed immediately after the head noun. This means that an overt subject, when present, cannot be in the canonical subject position, before the verb (SV), and must be postposed (VS).

- (9) 'the book that the teacher gave me yesterday'

- a. ***kitab*** *a-li-cho-ni-pa* *mwelimu* *jana*  
 7.book SM1-PST-RM7-OM1SG-give;F 1.teacher yesterday
- b. \****kitab*** *mwelimu* *a-li-cho-ni-pa* *jana*  
 7.book 1.teacher SM1-PST-RM7-OM1SG-give;F yesterday

These restrictions on *amba*-less constructions are well known, and their presence or absence is the main difference between the *amba*-less and the *amba* construction, as any Swahili textbook or grammar book will explain. Furthermore, Ashton (1947) and Polomé (1967) add some further differences between the *amba*-less construction and the *amba* construction. First, they explain that the *amba* construction is often preferred for stylistic reasons, for example, for sentence balance (Ashton 1947: 309) or to avoid separating the modifying clause from its head noun (Polomé 1967: 137). Example (10a) is from Ashton (1947: 309).

- (10) 'They are able to carry huge boxes, which two or even three of us could not lift'

- a. *Wa-na-wez-a* *ku-chukua* ***masanduku makubwa***, *amba-yo* *sisi*  
 SM2-PRS-can-F INF-pick 6.bboxes 6.big *amba*-RM6 we  
*watu wawili au watatu* *ha-tu-wez-i* *ku-ya-inua*.  
 2.people 2.two or 2.three NEG-SM1PL-can-NEG.F INF-OM6-carry

- b. ??*Wa-na-wez-a ku-chukua masanduku makubwa sisi watu*  
 SM2-PRS-can-F INF-pick 6.bboxes 6.big we 2.people  
*wawili au watatu tu-si-yo-wez-a ku-ya-inua.*  
 2.two or 2.three SM1PL-NEG-RM6-can-F INF-OM6-carry

The points made by Ashton and Polomé regarding stylistic reasons for preferring the *amba* construction are well supported by many written literary texts in Swahili, although it is only a preference and there is no certain or fixed rule.

Ashton (1947) further claims that sentences in which the relative clause is non-restrictive (“continuative” relatives, in Ashton’s terms) tend to require the *amba* construction. Example (11) is from Ashton (1947: 310).

- (11) *Hapo kale nchi ya Uganda ha-i-kuwa na watu*  
 a.long.time.ago 9.country 9.of Uganda NEG-SM9-BE with 2.people  
*ila mmoja, amba-ye a-li-it-w-a Kintu.*  
 except 1.one.person amba-RM1 SM1-PST-call-PASS-F Kintu  
 ‘Long ago Uganda had no inhabitants except one, who was called Kintu.’

It is true that *amba* constructions are found more frequently in non-restrictive relatives than in restrictive relatives. However, we can find a number of sentences that use *amba*-less constructions in non-restrictive relatives, such as (12) and (13).

- (12) *Mimi huyo ni-li-ye-jivuni-a sana mibuyu yangu!*  
 I 1.that SM1SG-PST-RM1-be.proud-F very 4.baobabs 4.my  
 ‘I, who was very proud of my baobab trees!’  
 (*Mwana Mdogo wa Mfalme*<sup>7</sup>, p. 110)

- (13) *mtoto wangu Neema a-na-ye-ka-a Japani*  
 1.child 1.my Neema SM1-PRS-RM1-live-F Japan  
 ‘my child Neema, who lives in Japan’

Another claim by Ashton is that the *amba* construction corresponds to English relative clauses governed by a preposition (Ashton 1947: 310). However, there are also many cases in which the *amba*-less construction corresponds to English relatives involving prepositional phrases, as we will see in the next section.

<sup>7</sup> *Mwana Mdogo wa Mfalme*. (a Swahili translation of Antoine de Saint-Exupéry’s *Le petit prince/The Little Prince* (1943), tr. by Philipp Kruse and Walter Bgoya. Dar es Salaam: Mkuki na Nyota Publishers, 2009).

## 4 Relations between the head noun and the modifying clause in Swahili

In the preceding section we consulted previous studies in order to introduce basic properties that are said to characterize *amba* and *amba*-less constructions, such as restrictions on morphology and word order and preference according to length or restrictiveness. In addition, *amba* and *amba*-less constructions also show differences in terms of the possible range of modification, a point that no previous studies have mentioned. This section will show that the distinction between inner and outer relations discussed above for Japanese is crucially relevant to *amba* and *amba*-less constructions.

### 4.1 The inner relation in Swahili

The inner relation in Swahili is commonly expressed by both the *amba* and *amba*-less constructions, as seen in examples (14) and (15). In each example, (a) exemplifies the *amba* construction and (b), the *amba*-less construction.

(14) ‘the man who bought a car’

- a. ***mwnamume*** *amba-ye* *a-li-nunu-a* *motokaa*  
 1.man                      amba-RM1   SM1-PST-buy-F   9.car
- b. ***mwanamume*** *a-li-ye-nunu-a* *motokaa*  
 1.man                      SM1-PST-RM1-buy-F   9.car

(15) ‘the car that the man bought’

- a. ***motokaa*** *amba-yo* *mwanamume* *a-li-nunu-a*  
 9.car                      amba-RM9   1.man                      SM1-PST-buy-F
- b. ***motokaa*** *a-li-yo-nunu-a* *mwanamume*  
 9.car                      SM1-PST-RM9-buy-F   1.man

In (14a, b) the head noun is the subject of the modifying clause, while in (15a, b) it is the object. Since the verb must come immediately after the head noun in an *amba*-less construction, the subject *mwanamume* ‘man’ is postposed in (15b) and the word order of the modifying clause is VS.

Examples (16) and (17) show relativization of applied objects (instrument or beneficiary) in applicative constructions: in (16), the head noun *mgonjwa* ‘sick person’ is the beneficiary, and *chungu* ‘cooking pot’ in (17), the instrument. The subject *Neema* is placed after the object *ugali* ‘porridge’ in (17b) because of the restriction on the word order in the *amba*-less construction.

(16) 'a sick person for whom I cooked porridge'

- a. **mgonjwa**    *amba-ye*    *ni-li-m-pik-i-a*    *ugali*  
 1.sick.person    *amba*-RM1    SM1SG-PST-OM1-cook-APPL-F    11.porridge
- b. **mgonjwa**    *ni-li-ye-m-pik-i-a*    *ugali*  
 1.sick.person    SM1SG-PST-RM1-OM1-cook-APPL-F    11.porridge

(17) 'a cooking pot with which Neema cooked porridge'

- a. **chungu**    *amba-cho*    *Neema*    *a-li-pik-i-a*    *ugali*  
 7.clay.pot    *amba*-RM7    Neema    SM3SG-PST-cook-APPL-F    11.porridge
- b. **chungu**    *a-li-cho-pik-i-a*    *ugali*    *Neema*  
 7.clay.pot    SM3SG-PST-RM7-cook-APPL-F    11.porridge    Neema

The head nouns in (18) and (19) denote place and time respectively and are not core arguments of the modifying clause. However, these non-core argument NPs can also function as part of their modifying clause, as in 'Neema cooked porridge in the kitchen' and 'I cooked porridge in the morning'. As noted above, this is the defining characteristic of the inner relation.

(18) 'the kitchen in which Neema cooked porridge'

- a. **jiko**    *amba-lo*    *Neema*    *a-li-pik-a*    *ugali*  
 5.kitchen    *amba*-RM5    Neema    SM3SG-PST-cook-F    11.porridge
- b. **jiko**    *a-li-lo-pik-a*    *ugali*    *Neema*  
 5.kitchen    SM3SG-PST-RM5-cook-F    11.porridge    Neema

(19) 'the morning on which I cooked porridge'

- a. **asubuhi**    *amba-yo*    *ni-li-pik-a*    *ugali*  
 9.morning    *amba*-RM9    SM1SG-PST-F    11.porridge
- b. **asubuhi**    *ni-li-yo-pik-a*    *ugali*  
 9.morning    SM1SG-PST-RM9-cook-F    11.porridge

As we have seen, when the head noun is in an inner relation, both *amba* and *amba*-less constructions can be used to modify it, provided that in the *amba*-less construction the word order and TAM restrictions mentioned above are respected. Although Ashton claimed that the *amba* construction corresponds to English relatives governed by a preposition (Ashton 1947: 310), the *amba*-less construction can also express relatives equivalent to English relatives with prepositions, as shown above in (16)–(19).

## 4.2 The outer relation in Swahili

We have seen examples of noun-modifying constructions of the head noun in inner relation. Now, we will move to constructions modifying nouns through both types (appositive and causal) of outer relation. As I have mentioned, previous studies of Swahili noun-modifying constructions have paid attention only to the inner relation, which corresponds to the construction generally considered to be a “relative clause”, and modifications using the outer relation, especially causal ones, have never been discussed.

### 4.2.1 The appositive relation

In the examples below, the head noun and the modifying clause are in an appositive relation, that is, the modifying clause conveys the content of the head noun.

- (20) Lit. ‘I have a plan that I will write about the accident.’

(intended meaning: I have a plan, which is that I will write about the accident.)

- a. *Ni-na mpango amba-o ni-ta-andik-a juu ya*  
 SM1SG-have 3.plan amba-RM3 SM1SG-FUT-write-F on 9.of  
*ajali hiyo.*  
 9.accident 9.that

- b. *Ni-na mpango ni-taka-o-andik-a juu ya ajali hiyo*  
 SM1SG-have 3.plan SM1SG-FUT-RM3-write-F on 9.of 9.accident 9.that

- (21) Lit. ‘He told me the result that they lost the football game.’

(intended meaning: He told me the result, which is that they lost the football game.)

- a. *A-li-ni-ambi-a matokeo amba-yo wa-li-shindw-a*  
 SM3SG-PST-OM1SG-tell-F 6.result amba-RM6 SM3PL-PST-lose-F  
*mchezo wa mpira.*  
 3.game 3.of 3.ball

- b. *A-li-ni-ambi-a matokeo wa-li-yo-shindw-a*  
 SM3SG.-PST-OM1SG-tell-F 6.result SM3PL-PST-RM6-lose-F  
*mchezo wa mpira.*  
 3.game 3.of 3.ball

The head noun *mpango* ‘plan’ in (20) is not an argument of the verb in the modifying clause. In this clause, the concrete content of the plan is to write an article about the accident. In (21), the concrete content conveyed by *matokeo* ‘result’ is that they lost



the football game. Thus, examples (20) and (21) suggest that the appositive relation can be expressed by both *amba* and *amba*-less constructions.

Examples (22) and (23), however, show different patterns: while these examples also show an appositive relation, the *amba*-less construction is less acceptable than the *amba* construction in (22) and not acceptable at all in (23).

- (22) Lit. 'This is a story that a hare lost a race'

(intended meaning: This is a story in which a hare lost a race.)

- a. *Hii ni hadithi amba-yo sungura a-li-shindw-a mashindano.*

9.this COP 9.story *amba*-RM9 1.hare SM1-PST-lose-F 6.race

- b. ?*Hii ni hadithi a-li-yo-shindw-a sungura mashindano.*

9.this COP 9.story SM1-PST-RM9-lose-F 1.hare 6.race

- (23) Lit. 'This is a story that a hare cheats an elephant and a crocodile.'

(intended meaning: This is a story, in which a hare cheats an elephant and a crocodile.)

- a. *Hii ni hadithi amba-yo sungura a-na-wa-dangany-a*

9.this COP 9.story *amba*-RM9 1.hare SM1-PRS-OM3PL-cheat-F

*tembo na mamba.*

1.elephant and 1.crocodile

- b. \**Hii ni hadithi a-na-yo-wa-dangany-a tembo na*

9.this COP 9.story SM1-PRS-RM9-OM3PL-cheat-F 1.elephant and

*mamba sungura*

1.crocodile 1.hare

The concrete content of the story in (22) is that 'a hare has lost a race', and in (23), 'a hare cheats an elephant and a crocodile.' In the *amba*-less construction, the subject noun must be postposed, as shown in (22b) and (23b), because nothing can be placed between the head noun and the verb. Postposing the subject noun is not a problem for the inner relation as long as the grammatical relation is unambiguously shown by the SM and the OM, as in (15b), (17b), and (18b). But it becomes a problem in the appositive, where *amba*-less constructions require grammatical relations to be clearly shown, more so than in the inner relation. Even in (22b) and (23b), the subject and object NPs do not belong to the same noun class, so the grammatical relation shown by the cross-referencing SM on the verb (= the class 1 subject) is clear and unambiguous. Nonetheless, the appositive seems to require the canonical word order, SVO, which is the "safety net" that guarantees disambiguation of grammatical relations in Bantu languages, according to Bearth (2003: 129). Therefore, even though (23b) is unacceptable, the *amba*-less construction with the same verb in (24) can be accepted, because it has no postposed subject noun (the subject is shown on the verb as a pronoun) and keeps the canonical word order.

- (24) *Hii ni hadithi ni-na-yo-wa-dangany-a majirani.*  
 9.this COP 9.story SM1SG-PRS-RM9-OM3PL-cheat-F 6.neighbors  
 lit. 'This is a story that I cheat neighbors.'  
 (intended meaning: This is a story about me cheating my neighbors.)

To summarize, in terms of the modification of the noun in an appositive relation in Swahili, both types of construction can be used to modify nouns in the appositive relation. However, when the verb in the modifying clause has more than two elements, the acceptability of postposing the subject decreases. The inner relation has no such restriction. This means that a clearer grammatical relation is required in the appositive than in the inner relation.

#### 4.2.2 The causal relation

Causality is another type of outer relation. The head noun in a causal relation, such as in (25), is the cause of the event that the modifying clause refers to.

- (25) 'a disease that many people died (from)'  
 (intended meaning: a disease that caused many people to die)
- a. *ugonjwa amba-o watu wengi wa-li-kuf-a*  
 11.disease amba-RM11 2.people 2.many SM2-PST-die-F
- b. *\*ugonjwa wa-li-o-kuf-a watu wengi*  
 11.disease SM2-PST-RM11-die-F 2.people 2.many

The head noun *ugonjwa* 'disease' here is not an argument of the verb *kufa* 'to die', but represents the cause of the event (in which) 'many people died', that is, of the modifying clause. In this case, the *amba*-less construction cannot be used and only the *amba* construction is acceptable, as shown in (25).

The head nouns in (26), (27), and (28) are the results of the events that the modifying clauses refer to.

- (26) Lit. 'tiredness (from) which I farmed the field without food'  
 (intended meaning: tiredness I felt from working in the field without eating)
- a. *uchovu amba-o ni-li-lim-a shamba bila chakula*  
 11.tiredness amba-RM11 SM1SG-PST-farm-F 5.field without 7.food
- b. *\*uchovu ni-li-o-lim-a shamba bila chakula*  
 11.tiredness SM1SG-PST-RM11-farm-F 5.field without 7.food

- (27) Lit. ‘money (from) which I sold a car’  
 (intended meaning: money I got for selling a car)  
 a. *pesa*      *amba-zo*      *ni-li-uz-a*      *motokaa*  
 10.money   *amba*-RM10   SM1SG-PST-sell-F   9.car  
 b. \**pesa*      *ni-li-zo-uz-a*      *motokaa*  
 10.money   SM1SG-PST- RM10-sell-F   9.car
- (28) Lit. ‘smell (of) which meat is being grilled’  
 (intended meaning: smell caused by meat being grilled)  
 a. *harufu*   *amba-yo*      *nyama*   *i-na-chom-w-a*  
 9.smell   *amba*-RM9   9.meat   SM9-PRS-grill-PASS-F  
 b. \**harufu*   *i-na-yo-chom-w-a*      *nyama*  
 9.smell   SM9-PRS-RM9-grill-PASS-F   9.meat

*Uchovu* ‘tiredness’ in (26) is what results from farming the field without eating. *Pesa* ‘money’ in (27) is what the speaker got as the result of selling a car. And *harufu* ‘smell’ in (28) is concomitant with the grilling of the meat, in other words, occurs as the result of grilling the meat. In short, these head nouns are not arguments of the verbs in the modifying clauses; they are the results of what the modifying clauses express. In such cases too, only the *amba* construction, not the *amba*-less construction, is acceptable.

As (25)–(28) demonstrate, when there is some causal relation between the head noun and the modifying clause – that is, when the head is the cause or the result of what the modifying clause describes – the *amba*-less construction cannot be used, and only the *amba* construction is acceptable.

However, the *amba* construction cannot be used completely freely for this purpose. Example (29), for instance, has low acceptability.

- (29) ?*harufu*   *amba-yo*      *maharagwe*   *ya-na-chemsh-w-a*  
 9.smell   *amba*-RM9   6.beans   SM6-PRS-boil-PASS-F  
 lit. ‘smell (from) which beans are being boiled’  
 (intended meaning: smell caused by beans being boiled)

The relation between the head noun and the modifying clause in (29) is the same as that in (28). Although in both (28) and (29), the head noun *harufu* ‘smell’ happens or exists as a result of the event described by the modifying clause, (29) is less acceptable than (28). The reason is that, as opposed to grilling meat, boiling beans is less likely to produce a recognizable smell, and therefore it is more difficult to infer or interpret a causal relation between the head noun ‘smell’ and the modifying clause ‘beans are being boiled’ (Yoneda 2012, 2014). This suggests that even for the *amba*

construction, it is necessary that there be a clear causal relation between the head noun and the modifying clause.

In practice, there is speaker variation in the acceptability of expressing the causal relation with the *amba* construction: some speakers find it acceptable, others unacceptable. It seems that the degree of acceptability depends on how easily the causality can be perceived. This in turn means that there are some cases in which *amba* constructions are unacceptable pragmatically although correct syntactically.

The generalization that emerges, then, is that a wide range of head–modifier relations can be expressed using the *amba* construction *as long as* a clear relation is established on pragmatic grounds. The same condition holds for Japanese noun-modifying clauses, which do not syntactically distinguish types of relation between the head noun and the modifying clause. Therefore, pragmatics takes on an important role in determining the head–modifier semantic relation and thus the acceptability of the construction (Matsumoto 1997, 2014; Katō 2003; Masuoka 2010; Matsumoto and Comrie this volume).

In both Japanese and Swahili, then, the construction cannot be found appropriate unless it is found pragmatically acceptable, but it becomes acceptable if the pragmatics can support it, as shown in (30) and (31).

#### Japanese

- (30) ?*inu o sanpo-sase-ta okane* (Masuoka 2010: 321)  
       dog ACC walk-CAUS-PST money  
       lit. ‘money (from) which (someone) walked a dog’  
       (intended meaning: money someone got for walking a dog)

#### Swahili

- (31) ?*pesa amba-zo ni-li-fundish-a Kiswahili*  
       10.money amba-RM10 SM1SG-PST-teach-F 7.Swahili  
       lit. ‘money (from) which I taught Swahili’  
       (intended meaning: money I got for teaching Swahili)

Above, (30) is odd, especially presented on its own, but given the right context, it becomes acceptable: for example, if someone’s job is to be a dog-walker, it can mean ‘the money I earned from my job, which is to walk a dog’ (Masuoka 2010). Similarly, in the Swahili example in (31), without any context, the *amba* construction is only marginally acceptable, but when an appropriate context is provided, it becomes acceptable.

### 4.3 Summary

Swahili has a number of textbooks and some grammar books, unlike most African languages. All of them contain explanations of relative clauses, that is, of the modification of a head noun that holds an inner relation to the noun-modifying clause, but the outer relation has never been considered in such works. Also there are quite a few studies of Swahili noun-modifying clauses (Keach 1980, 2004; Tyler 1985; Schadeberg 1989; and Buell 2000, 2002, among others). However, most of them focus on structure and/or grammatical agreement, and none of them discuss the difference in the range of the head–modifier relation across the *amba* and *amba*-less constructions.

The *amba*-less construction is restricted not only in terms of morphology and word order but also in terms of the relation between the head noun and the modifying clause: it is mainly used in the inner relation. The noun in the appositive relation, one type of outer relation, can also be modified using the *amba*-less construction, but only with additional restrictions: for example, keeping the canonical SVO word order. That is, a clearer expression of grammatical relations is required in the appositive relation than in the inner relation to license the *amba*-less construction. Further, the *amba*-less construction cannot modify the noun in the causal relation. In contrast, the *amba* construction can modify the noun not only in the inner relations but also in both appositive and causal outer relations. As already mentioned, there is speaker variation in the acceptability of *amba* constructions conveying causality; nonetheless the *amba* construction is certainly preferred to the *amba*-less construction for the modification of nouns in any outer relations.

Although the *amba* construction can be used to express inner as well as outer relations, the *amba*-less construction appears more frequently in inner relations. In chapters 1, 2, and 3 of *Mwana Mdogo wa Mfalme*, noun-modifying constructions are used 34 times, and of those, 29 are *amba*-less (Yoneda 2012: 25). Further, in almost all cases where the *amba* construction is used, the *amba*-less construction cannot be used due to TAM or word order restrictions. Thus, there is a clear preference for the *amba*-less construction in the inner relation, despite the various restrictions discussed above. The various head–modifier relations expressed by these constructions are summarized in Table 1.

**Table 1:** Head–modifier relations expressed by *amba*/*amba*-less constructions

		<i>amba</i> -less construction	<i>amba</i> construction
inner relation	TAM and word order are OK	yes	yes but not preferred
	restricted TAM and word order	no	yes
outer relation	appositive	yes with additional restrictions	yes
	causal	no	yes

## 5 Conclusion

Previous studies have noted that the *amba*-less construction operates under some unique restrictions, such as co-occurring TAMs and SM, and some word order restrictions; this is in contrast to the *amba* construction, which shows no such restrictions. However, this chapter has shown that restrictions are present not only in morphology and word order but also in the head–modifier relation. That is, the *amba*-less construction can only be used to express the inner relation and limited cases of the appositive relation, while the *amba* construction can be used to modify nouns not only in the inner relation but also in the outer relation, both appositive and causal.

Swahili is undoubtedly one of the most studied languages of Africa. There are grammar books, many textbooks, and a large body of research on noun-modifying constructions in this language. However, the main interest of most of these studies has been the structure of these constructions; no previous work has dealt with the outer relations of noun-modifying clauses. One reason is probably that Swahili noun-modifying clauses have been treated as being equivalent to “relative clauses”, which are generally understood to involve noun modification in the inner relation.

As shown in Section 2, both inner and outer relations can be expressed by a single noun-modifying construction in Japanese. In this light, it seems that a Swahili *amba*-less construction is just as limited as a “typical” relative clause, while the *amba* construction is used in a broader context, like a Japanese noun-modifying clause. Masuoka (2013) characterizes languages like Japanese, where a single construction is used regardless of the type of head–modifier relation, as “language[s] that do [...] not constructionally distinguish head–modifier relations” (2013: 111). The *amba* construction is similar to these in that it can be used to express any type of head–modifier relation.

Of course there is also an important difference between Japanese and Swahili noun-modifying constructions. In Swahili, the *amba* construction is not the only such construction. Importantly, even though the *amba* construction is possible in any context, the *amba*-less construction is preferred whenever it is grammatically allowed, and in the inner relation, the *amba* construction is used only when the *amba*-less construction cannot be used due to TAM or word order restrictions. Table 1 shows the range of acceptability in each construction, but rather than thinking of this in terms of each construction having its own acceptable domain, it is perhaps more appropriate to understand that the *amba* construction is the more general one, used whenever the *amba*-less construction cannot be used. Thus, when we consider the *amba* construction by itself, we do not need to refer to any relational meaning with the head noun, as in Japanese; however, the complementary use of *amba* and *amba*-less constructions suggests that various head–modifier relations are, in fact, sometimes relevant in Swahili noun-modifying clauses, unlike in Japanese.

There is one more important difference between Japanese noun-modifying constructions and Swahili *amba* construction, namely the range of possible semantic relations. This chapter has dealt with only causality as a non-appositive outer relation. However, Japanese noun-modifying constructions can take such head nouns as express temporal or spatial deixis, in addition to nouns implying a causality relation (Masuoka 2010. See note 4). On the other hand, in the Swahili *amba* construction, the head noun can only hold as an outer relation the causal or the appositive relation with its modifying clause. The range of semantic relations that the *amba* construction can deal with is much wider than the *amba*-less construction or prototypical relative clauses in many languages, and yet it is not as wide as Japanese noun modifying constructions. From the typological perspective, the data in Swahili, crucially in comparison with Japanese, seem to suggest that perhaps there is a continuum of semantic relations that can enter into various noun modifying constructions. The Japanese noun modifying construction in the outer relation seems to be at the extreme end of the continuum, in which the head noun can hold any semantic relation to the modifying clause.

This chapter has examined two types of Swahili noun-modifying constructions in light of the Japanese studies on noun-modifying constructions. It has identified the acceptable/preferred domains of each construction in Swahili, as no previous studies have done. From this comparative perspective, it seems that Japanese linguistics still has much to contribute to Swahili linguistics, as Swahili studies have mainly been pursued from a point of view of Western linguistics, and, of course, vice versa, as Japanese has also hardly been studied from the perspective of contrastive studies with African languages.

## Additional abbreviations

APPL – applicative; F – final vowel; OM – object marker; RM – relative marker; SM – subject marker; TAM – tense/aspect marker.

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# 15 Quantifier float in Japanese and English

## 1 Introduction

It is often the case that a contrastive study of Japanese and another language, for example English, reveals what is not apparent when only Japanese is observed, and that, conversely, a contrastive study of English and Japanese reveals what is not evident when only English is observed. That is, a contrastive study of Japanese and English brings about enlightening and fruitful results for studies of both languages. Let me give just one example here. An English sentence such as (1a) is impeccable, but its literal translation of Japanese given in (1b) is totally unacceptable.

- (1) a. Taro **visited** me.  
b. \**Taroo ga watasi o tazuneta.*  
Taro NOM I ACC visited  
'Taro visited me.'

In Japanese, the speaker must use the deictic verb *kita* 'came' to show that the action of Taro's visiting him/her took place toward him/her, as in (2a), or the giving verb *kureta* 'gave' (nonsubject-centered) to show that the speaker was favorably affected by the action, as in (2b), or both *kite* 'coming' and *kureta* 'gave', as in (2c) (see Kuno and Kaburaki 1977; Takami and Kuno 2002, among others).

- (2) a. *Taroo ga watasi o tazunete kita.*  
Taro NOM I ACC visit came  
'Taro visited me.'  
b. *Taroo ga watasi o tazunete kureta.*  
Taro NOM I ACC visit gave  
'Taro visited me.'  
c. *Taroo ga watasi o tazunete kite kureta.*  
Taro NOM I ACC visit coming gave  
'Taro visited me.'

This shows that Japanese can be characterized as a speaker-centered language. To put it differently, in Japanese the speaker must explicitly indicate his/her own viewpoint when using verbs representing the transfer of a person/thing or a message from A to B, B being the speaker or someone close to him/her. From this we would

further suppose that Japanese is rich in expressions showing the speaker's viewpoint and that the speaker's viewpoint or subjectivity must be strongly reflected in Japanese. Note here that this kind of thought is possible only when (2a–c) are contrasted with (1a, b); we would not realize the inherent character of the compound verbals in (2a–c) without contrasting them with the acceptability of (1a), together with the unacceptability of (1b). Conversely, we also notice by contrasting (1a) with (1b) and (2a–c) that English is primarily concerned with objectivity, that is, only the literal transfer is important, and the speaker's viewpoint or subjectivity does not have to be encoded in English. This realization is also possible only when we compare (1a) with (1b) and (2a–c); we would not notice this if we just observed the naturalness of (1a). Therefore, a contrastive study of languages seems to give helpful and valuable insights into a deeper understanding of each language.

This chapter compares the positional variation of quantifiers in Japanese and English. The positional variation of quantifiers in Japanese has long been discussed in the literature, and this is true of English quantifiers also, but the discussions of the variations seem to have been conducted independently for the two languages. By comparing them in this chapter, I will show that the examination of the positional variation of quantifiers in Japanese will give enlightening insights into the variation in English (Sections 2 and 4), the crucial difference between Japanese and English in the types of quantifiers that can float, and the reason why there is such a difference (Section 3). In short, I would like to show that a study of this phenomenon in each language benefits greatly from a contrastive study of the phenomenon between Japanese and English.

Japanese quantifiers such as *subete* 'all', *sorezore* 'each', *hotondo* 'most', *takusan* 'many/much', and *sukosi* 'some/a few/a little' allow positional variation in syntactic structure. Since they have the function of quantifying the number or amount of nominal concepts, their default position is considered to be at the immediate left of the NP they modify. In this position, quantifiers are followed by the genitive particle *no*, as in (3a). This also holds true for Japanese numeral quantifiers (NQs) such as *san-nin* '3-CLF<sub>human</sub>' and *go-satu* '5-CLF<sub>book</sub>', as shown in (3b). Note that an NQ consists of a numeral and a suffixal classifier (CLF) that agrees with the type of entity being counted. For example, *san-nin* '3-CLF<sub>human</sub>' consists of the numeral *san* 'three' and the classifier *-nin* used for counting people, and *go-satu* '5-CLF<sub>book</sub>' is composed of the numeral *go* 'five' and the classifier *-satu* used for counting bound volumes such as books and magazines.<sup>1</sup>

<sup>1</sup> Depending on context, the word *gakusei*, for example, can mean 'a student', 'students', or even 'the student(s)' in Japanese. For this reason, plural markers like *-tati* and *-ra* rarely surface. When a specific reference to the definiteness of an entity is required, demonstrative pronouns such as *sono* 'the/that' and *ano* 'that' are attached to the entity, as in *sono gakusei* 'the/that student'.

- (3) a. **subete/takusan** no gakusei / **sukosi** no okane  
 all / many GEN student / a.little GEN money  
 ‘all (the) / many students’ / ‘a little money’
- b. **san-nin** no gakusei / **go-satu** no hon  
 3-CLF<sub>human</sub> GEN student / 5-CLF<sub>book</sub> GEN book  
 ‘three students’ / ‘five books’

In Japanese, besides the default position given in (3a, b), quantifiers can take a position separated from the NPs that they modify. Compare, for example, (4a) and (4b), which are conceptually synonymous.

- (4) a. [<sub>NP</sub> **Subete / Takusan / San-nin** no gakusei ga] kinoo paatii ni kita.  
 all / many / 3-CLF<sub>human</sub> GEN student NOM yesterday party to came  
 ‘All the students / Many / Three students came to the party yesterday.’
- b. [<sub>NP</sub> Gakusei ga] kinoo **subete / takusan / san-nin** paatii ni kita.  
 student NOM yesterday all / many / 3-CLF<sub>human</sub> party to came  
 (Same meaning as 4a)

The sentence pattern of (4b), in which a quantifier is separated from its associated NP, has long been referred to in the literature as the “quantifier float” construction, and the coexistence of the two constructions (4a) and (4b) has sparked a controversy over whether (4b) is derived from (4a) by the actual “floating” of the quantifier (quantifier movement) or is base-generated in situ independently of (4a).

The phenomenon of quantifier float is also well known in English, but interestingly enough, English allows only the universal quantifiers *all*, *each*, and *both* to be separated from their associated NPs, while disallowing the separation of existential and numeral quantifiers such as *many*, *some*, and *three*. Observe the following.

- (5) a. [<sub>NP</sub> **All / Each** of the students] will come to the party tonight.  
 b. [<sub>NP</sub> The students] will **all / each** come to the party tonight.
- (6) a. [<sub>NP</sub> **Many / Three** of the students] will come to the party tonight.  
 b. \*[<sub>NP</sub> The students] will **many / three** come to the party tonight.

While (5b) is acceptable, (6b) is impossible. The impossibility of (6b) stands in sharp contrast to the acceptability of Japanese numeral and existential quantifiers in the same construction type, as in (4b). Therefore, a question arises as to why all quantifiers including NQs can be separated from their associated NPs in Japanese, while only universal quantifiers can in English. As with Japanese quantifier float, the quantifier float phenomenon in English has led many linguists to discuss whether

(i) a quantifier is floated from its associated NP through rightward movement, or (ii) what actually moves out is not a quantifier but its associated NP (i.e. leftward movement of the NP on the basis of the VP-Internal Subject Hypothesis), or (iii) syntactic movement, whether rightward or leftward, is not involved at all, and sentences such as (5b) are base-generated.

What has been discussed most about Japanese quantifier float seems to be the problem of where a quantifier, particularly one modifying the subject, can be placed in the sentence. A number of generative grammarians including Kuroda (1980, 1983), Haig (1980), and Miyagawa (1989) have argued that a (numeral) quantifier modifying the subject can be positioned next to the subject, as in (7a), but not between the object and the verb, as in (7b).<sup>2</sup>

- (7) a. [<sub>NP</sub> *Gakusei ga*] ***san-nin*** *hon o katta*.  
           student NOM 3-CLF<sub>human</sub> book ACC bought  
           ‘Three students bought books.’

- b. \* [<sub>NP</sub> *Gakusei ga*] [<sub>VP</sub> *hon o* ***san-nin*** *katta*].  
           student NOM book ACC 3-CLF<sub>human</sub> bought (Kuroda 1983: 154)

However, some scholars working in different frameworks, such as Naito (1993), Hamano (1997), and Gunji and Hashida (1998) among others, have presented counterexamples to this syntactic formulation and proposed their own analyses of the positions of floated quantifiers.<sup>3</sup> Miyagawa and Arikawa (2007), working in the Minimalist Program framework of generative grammar, have responded to such counterexamples and proposed their own syntactic analysis.

In this chapter, I will first discuss briefly in Section 2 whether quantifier float sentences are derived by syntactic movement or base-generated in situ, paying particular attention to Japanese quantifiers and their associated NPs. I will argue here that they are best considered to be base-generated. Second, I will consider in Section 3 some differences between Japanese and English quantifier float, focusing on the types of quantifiers and their associated NPs, and discuss why only universal quantifiers can float in English, whereas all quantifiers including NQs can do so in Japanese. Third, in Section 4, after briefly reviewing a number of claims made for

2 Sentences such as (7b), ever since they were marked as \* by Kuroda (1980, 1983), have been regarded as unacceptable, but in fact they are marginal or unnatural (???) for many Japanese. In this chapter, however, I will follow the traditional marking of acceptability to avoid confusion, though I would like to remind the reader that the judgments of this type of sentence tend to fluctuate among speakers.

3 Following the past literature, I will sometimes use, in the absence of any better terms, the expression “a floated quantifier” to refer to a quantifier that is separated from its associated NP by an intervening element.

sentences such as (7a, b), I will argue that the problem of where a (numeral) quantifier can float in the sentence in Japanese can be better explained in functional terms than in syntactic ones. A similar functional account is also given for English quantifier float.

## 2 Syntactic movement or base-generation?

Until about the late 1970s, it was commonly assumed in generative grammar that a quantifier float sentence like (8b) is transformationally derived from (8a) by the rule of quantifier float (e.g. Okutsu 1974; Kamio 1977; Shibatani 1977).

- (8) a. [**Takusan** / **Go-nin** no okyaku ga] kon'ya uti ni kuru.  
       many / 5-CLF<sub>human</sub> GEN guest NOM tonight home to come  
       'Many / Five guests will come to my house tonight.'
- b. [Okyaku ga] kon'ya **takusan** / **go-nin** uti ni kuru.  
       guest NOM tonight many / 5-CLF<sub>human</sub> home to come  
       (Same meaning as 8a)

However, ever since Inoue (1978) showed that the two constructions in question sometimes convey different meanings, it seems to have been commonly assumed in the recent literature that no syntactic movement is involved and that quantifiers are base-generated in their surface positions; hence the relations between quantifiers and their associated NPs are captured by semantic interpretive rules (see Ueda 1986; Miyagawa 1989, among others). Observe the following pair of sentences (see Inoue 1978 for similar examples).

- (9) a. Boku wa [**huta-tu** no sono ringo o] tabeta.  
       I TOP 2-CLF<sub>inanimate</sub> GEN the apple ACC ate  
       'I ate the two apples.'
- b. Boku wa [sono ringo o] **huta-tu** tabeta.  
       I TOP the apple ACC 2-CLF<sub>inanimate</sub> ate  
       'I ate two of the apples.'

In (9a), the interpretation is that the number of apples is just two. But (9b) shows that there are more than two apples, and that the speaker ate only two of those apples. It has long been held in generative grammar that transformations do not change meaning, and therefore the difference in meaning between (9a) and (9b) indicates that (9b) is not derived from (9a) by syntactic movement, but instead both sentences are independently base-generated.

I would like to point out here, as further evidence for base-generation, that there are some quantifiers that cannot appear at their alleged underlying positions, or at positions separated from their associated NPs. First, observe the following.

- (10) a. \*[*Minna* no kare no kyoodai ga] kinoo atumatta.  
           all GEN he GEN brother NOM yesterday got.together  
           ‘All of his brothers got together yesterday.’
- b. [*Kare* no kyoodai ga] kinoo *minna* atumatta.  
           he GEN brother NOM yesterday all got.together  
           ‘All of his brothers got together yesterday.’
- (11) a. \*[*Daremo* no gakusei ga] kinoo konakatta.  
           anybody GEN student NOM yesterday didn’t.come  
           ‘None of the students came yesterday.’
- b. [*Gakusei* ga] kinoo *daremo* konakatta.  
           student NOM yesterday anybody didn’t.come  
           ‘None of the students came yesterday.’

As shown in (10a, b) and (11a, b), the quantifiers *minna* ‘all’ and *daremo* ‘any(body)’ cannot appear at their alleged base-position, but they can at other positions.

Observe, on the other hand, the following contrast.

- (12) a. *Kare* ni [*wazuka* no okane o] ataeta.  
           he DAT a.little GEN money ACC gave  
           ‘I gave him a little money.’
- b. \**Kare* ni [*okane* o] *wazuka* ataeta.  
           he DAT money ACC a.little gave  
           ‘I gave him a little money.’

The quantifier *wazuka* ‘a little’, in contrast to *minna* ‘all’ and *daremo* ‘any(body)’, cannot appear at a position separated from its associated NP. This seems to show that Japanese quantifiers are classified into three categories: (i) quantifiers like *minna* ‘all’ and *daremo* ‘any(body)’ whose independent status is so high that they must be separated from their associated NPs, (ii) those like *wazuka* ‘a little’ whose independent status is so low that they must be in the same phrase as their associated NPs, and (iii) many others such as *subete* ‘all’, *sorezore* ‘each’, *hotondo* ‘most’, *takusan* ‘many/much’, *sukosi* ‘some/a few/a little’, *suu-nin* ‘some-CLF<sub>human</sub>’, and *san-nin* ‘3-CLF<sub>human</sub>’, whose independent status is in between (i) and (ii). It is clear that the first and second types of quantifier are left unaccounted for under the movement



analysis of quantifiers, and it seems best to consider that all quantifiers are base-generated at their surface positions without any movement.

Let us turn to English quantifier float and consider how the two constructions in question have been treated. Many researchers assumed until around the middle of the 1980s that a quantifier float sentence like (13b) should be derived from an underlying sentence like (13a) by rightward movement of the quantifier (e.g. Postal 1974, 1976; Maling 1976; Baltin 1978).<sup>4</sup>

- (13) a. [**All** the children] have seen this movie.  
 b. The children have **all** seen this movie. (Sportiche 1988: 426)

Based on the VP-Internal Subject Hypothesis (see, among others, Koopman and Sportiche 1985, Fukui and Speas 1986, Kitagawa 1986), however, Sportiche (1988) has argued that both (13a) and (13b) are derived by leftward movement of the subject NP from its original specifier position of VP, as shown in (14a) and (14b), respectively (*t* stands for a trace left behind after NP-movement takes place).

- (14) a. [<sub>IP</sub> [<sub>NP</sub> **All** the children] [<sub>I'</sub> have [<sub>VP</sub> [<sub>NP</sub> *t*] [<sub>V'</sub> seen this movie]]]]  
 ↑  
 b. [<sub>IP</sub> [<sub>NP</sub> The children] [<sub>I'</sub> have [<sub>VP</sub> [<sub>NP</sub> **all** *t*] [<sub>V'</sub> seen this movie]]]]  
 ↑

In (14b) only the part of the subject NP, *the children*, is moved, with the quantifier *all* stranded in situ.

Although Sportiche's stranding analysis of a quantifier has been supported by subsequent research such as Radford (1997) and Bošković (2004), it has faced a number of serious problems. For example, Baltin (1995) and Bobaljik (2003) have pointed out that passive and unaccusative sentences involving stranded quantifiers, such as (15a, b), though totally unacceptable, would be incorrectly predicted to be acceptable within the analytical framework of Sportiche.

- (15) a. \*The children were scolded [<sub>NP</sub> **all** *t*].  
 ↑  
 b. \*The guests have arrived [<sub>NP</sub> **all** *t*].  
 ↑

<sup>4</sup> In (13a), Sportiche (1988) used the expression [*all the children*] without the preposition *of* between *all* and *the children*. But many other linguists have used an expression like [*all of the children*] so far, as shown in (5a). In the case of *all* (and *both*), these two expressions are both acceptable, but in the case of *each*, *of* is necessary (*each of the children* / \**each the children*).

In the Government and Binding Theory of generative grammar, it was assumed that the subjects of passive and unaccusative verbs take the direct object position at D-structure, and move to the specifier position of IP at S-structure to receive Case. Under the stranding analysis, therefore, only *the children* and *the guests* in (15a, b) should be able to move to the Spec-IP position, with *all* stranded in its original position. Faced with these problems and others, some scholars such as Nakamura (1983, 1996) and Bobaljik (2003) have claimed that quantifier float sentences are not derived by syntactic movement but are base-generated.

As far as the literature on English syntax is concerned, it appears that no agreement has as yet been reached as to whether quantifiers float in English or not. However, the contrastive evidence observed above suggests rather strongly that quantifiers are base-generated in their surface positions in both Japanese and English.

### 3 Types of quantifiers and their associated NPs

As mentioned in the Introduction, the quantifier float phenomenon in English is restricted to universal quantifiers such as *all*, *each*, and *both*, while those in Japanese include even existential and numeral quantifiers. Where does this difference come from? First, observe the following two English sentences.

- (16) a. **The students** are **both** intelligent.  
       b. **Children** are **all** curious about the world.

Since *both* in (16a) refers to *the students*, and *all* in (16b) refers to *children*, we note that these quantifiers serve as “appositive pronouns” for their associated NPs. Therefore, quantifiers and their associated NPs have to refer to the same referent in English quantifier float sentences.

It is important to note here that the referent of an associated NP must already be known to both the speaker and the hearer. In (16a), the speaker and the hearer already know the referents of the NP *the students*, including its number, as evidenced by the fact that it includes the definite article *the*. In (16b), the speaker and the hearer also know the referents of *children* because it is a generic NP.

From these considerations we now understand why only universal quantifiers can appear in English quantifier float sentences. Observe the following.

- (17) a. **\*Students** are **both** intelligent.  
       b. **\*The children** have **some / three** enjoyed the movie.

In (17a), the subject is an indefinite NP (*students*), and therefore the speaker and the hearer do not know its referents, including its number. Accordingly, the referents of

*students* are not the same as those of *both* (*of the students*), and *students* cannot be identified with *both*; hence the unacceptability of (17a). In (17b), on the other hand, while the subject is a definite NP (*the children*), *some* and *three*, unlike *both* in (17a), are existential and numeral quantifiers. Therefore, the referents of *the children* are not the same as those of *some / three* (*of the children*), and *the children* cannot be identified with *some / three*; hence the unacceptability of (17b).<sup>5</sup>

Now in the case of Japanese quantifier float, a totally different picture emerges. The referent of the associated NP of a floated quantifier does not have to be known to the speaker and the hearer. Observe (4b), repeated below.

- (4) b. [<sub>NP</sub> *Gakusei ga*] *kinoo subete / san-nin paatii ni kita.*  
 student NOM yesterday all / 3-CLF<sub>human</sub> party to came  
 ‘All the students / Three students came to the party yesterday.’

The subject *gakusei ga*, an indefinite NP in itself, can mean either ‘the student(s)’ or ‘student(s)’, depending on context (see note 1). The acceptability of (4b) thus shows that a floated quantifier in Japanese does not identify the referent of its associated NP, but rather “specifies” or “restricts” the number (or amount) of the referent of that NP. To put it differently, a floated quantifier in Japanese serves to show how many (or how much) of the referent of its associated NP is involved in the event or state described in the sentence; hence the referent of the associated NP does not have to be known to the speaker and the hearer. This specifying or restricting function can be performed not only by universal but also by existential and numeral quantifiers. Hence, striking differences arise between English and Japanese quantifier float concerning the types of quantifiers as well as the types of associated NPs.

But why is it the case that even existential and numeral quantifiers can float in Japanese, unlike the situation in English? This is attributable to the fact that Japanese allows the double subject (big and small subjects) construction, as shown in (18a, b), but English does not.

- (18) a. *Yamada-ke wa/ga tyoonan ga isya ni natta.*  
 Yamada-family TOP/NOM oldest.son NOM doctor became  
 ‘The oldest son in the Yamadas became a doctor.’  
 b. *Kono kuni wa/ga roozin ga sitawareteiru.*  
 this country TOP/NOM old.people NOM are.adored  
 ‘In this country old people are adored.’

To sum up this section, floated quantifiers in English function as appositive pronouns and refer to the same referent as their associated NPs, which is known to the

<sup>5</sup> *Every*, though a universal quantifier, is an adjective and does not function as a pronoun, unlike *all*, *each*, and *both*. Therefore, it cannot appear in either of the positions under discussion, as shown below.

- (i) a. \***[Every of the musicians]** will play the violin.  
 b. \*The musicians will **every** play the violin.

speaker and the hearer. Hence they must be universal quantifiers. On the other hand, floated quantifiers in Japanese function as small subjects, so to speak, and therefore they do not have to refer to the same referent as their associated NPs. Hence they can be not only universal but also existential and numeral quantifiers. In other words, English floated quantifiers serve to identify the number (or amount) of the referent of their associated NPs, while Japanese ones serve to restrict it.

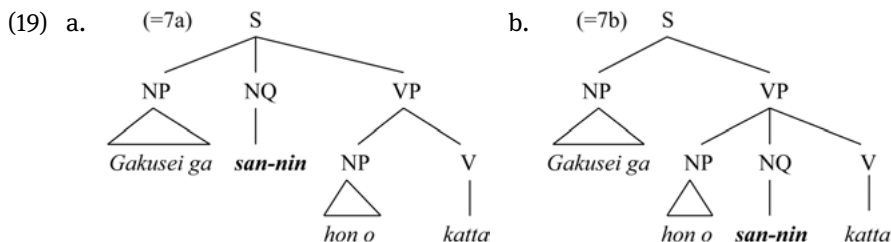
## 4 The relation between quantifiers and their associated NPs

In this section I will first review briefly two generative grammar analyses of Japanese quantifier float proposed by Miyagawa (1989) and Miyagawa and Arikawa (2007), and then point out a number of serious empirical problems with them. I will next propose an alternative functional account of this phenomenon and show that this problem is controlled by functional rather than syntactic factors. Finally, I will argue that a similar functional factor plays a crucial role in deciding the acceptability of quantifier float in English.

### 4.1 Generative grammar analyses and their problems

In the framework of generative grammar, Miyagawa (1989) attempted to account for the relation between a floated quantifier and its associated NP by his Mutual C-command Requirement, which states that a floated quantifier (or its trace) and its associated NP (or its trace) must mutually c-command each other.<sup>6</sup> Observe (7a, b), repeated below, and their simplified syntactic structures shown in (19a) and (19b).

- (7) a. [<sub>NP</sub> *Gakusei ga*] ***san-nin*** *hon o katta*.  
           student NOM 3-CLF<sub>human</sub> book ACC bought  
           ‘Three students bought books.’
- b. \*[<sub>NP</sub> *Gakusei ga*] [<sub>VP</sub> *hon o san-nin katta*].  
           student NOM book ACC 3-CLF<sub>human</sub> bought (Kuroda 1983: 154)



<sup>6</sup> The notion of c-command that Miyagawa uses is as given in (i) (Reinhart 1976).

(i) C-command: A c-commands B if neither A nor B dominates the other and the first branching node dominating A also dominates B.

Miyagawa assumes that *san-nin* ‘3-CLF<sub>human</sub>’ in the above sentences is base-generated in its surface structure position (see Section 2). Note that in (19a) the subject NP *gakusei ga* and the NQ *san-nin* c-command each other, while in (19b) the NQ *san-nin* does not c-command the subject *gakusei ga*, due to the intervention of the VP node, though the latter c-commands the former. Hence (7a) is predicted to be acceptable, satisfying the Mutual C-command Requirement, but (7b) is predicted to be unacceptable, violating the Requirement.

Miyagawa (1989) further argues that his Mutual C-command Requirement can also account for the acceptability differences that result from the argument/adjunct distinction or the unaccusative/unergative distinction. Observe the following contrasting pairs of sentences, taken from Miyagawa (1989: 31, 35, 43–44)

(20) Argument/Adjunct distinction

- a. *Boku wa* [<sub>VP</sub> *yuumeina gakusya ni* ***san-nin*** *atta*].  
 I TOP famous scholar DAT 3-CLF<sub>human</sub> met  
 ‘I met three famous scholars.’
- b. \**Gakuseitai wa* [<sub>VP</sub> [<sub>PP</sub> *kuruma de*] ***ni-dai*** *kita*].  
 student TOP car with 2-CLF<sub>machine</sub> came  
 ‘Students came in two cars.’

(21) Unaccusative/Unergative distinction

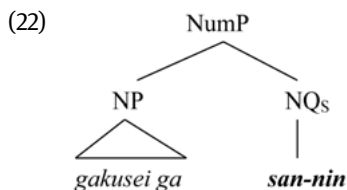
- a. *Kyaku ga*<sub>i</sub> [<sub>VP</sub> *ryokan ni* *t*<sub>i</sub> ***huta-ri*** *tuita*].  
 guest NOM inn to 2-CLF<sub>human</sub> arrived  
 ‘Two guests arrived at the inn.’
- b. \**Kodomo ga* [<sub>VP</sub> *geragera to* ***huta-ri*** *waratta*].  
 children NOM uproariously 2-CLF<sub>human</sub> laughed  
 ‘Two children laughed uproariously.’

In (20a), the dative NP *yuumeina gakusya ni* ‘famous scholars’ is an argument of *atta* ‘met’, and therefore it and the NQ *san-nin* ‘3-CLF<sub>human</sub>’ c-command each other; hence acceptability. In (20b), on the other hand, *kuruma de* ‘in cars’ is an adjunct of *kita* ‘came’ denoting means, and is dominated by a PP node. Thus, *kuruma* does not c-command the NQ *ni-dai* due to the intervention of the PP node; hence unacceptability.

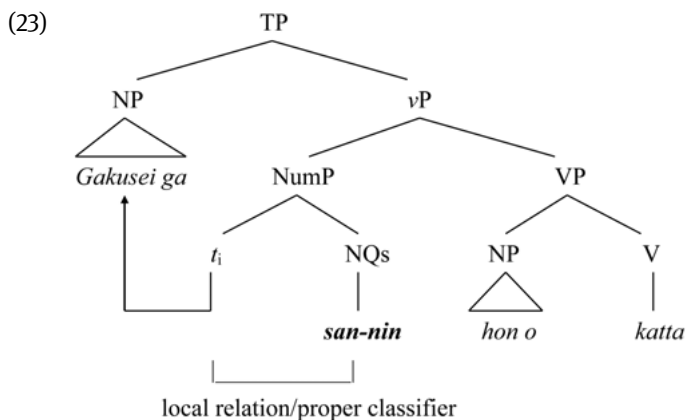
Miyagawa, presenting examples such as (21a, b), observes that in the case of unaccusative verbs, an NQ modifying the subject can appear in VP, while in the case of unergative verbs, it cannot. *Tuku* ‘arrive’ in (21a) is a typical unaccusative verb, whose subject is assumed to originate in VP and move to the surface subject position at S-structure. Therefore, the trace left behind after movement of *kyaku ga* (i.e. *t*<sub>i</sub>) and the NQ *huta-ri* c-command each other, thereby satisfying the Mutual

C-command Requirement. Hence the acceptability of (21a). In (21b), on the other hand, *warau* ‘laugh’ is a typical unergative verb, whose subject is assumed to take the subject position throughout the derivation. Therefore, the NQ *huta-ri* modifying the subject *kodomo* does not c-command the subject due to the intervention of the VP node. Hence, (21b) results in unacceptability, in violation of the Mutual C-command Requirement.

In the recent Minimalist Program framework of generative grammar, only binary-branching structures built up by successive binary merger operations are allowed, and ternary structures that Miyagawa (1989) assumed in the framework of GB Theory, as shown in (19a, b), are not allowed at all. It is also assumed in the framework of the Minimalist Program that there is a light verb phrase (*vP*) between TP (=IP/S) and VP, and that the subject of a sentence (a transitive/unergative verb sentence) originally takes the specifier position of *vP* (Spec, *vP*) (see Chomsky 1995, 2000, among others). Miyagawa and Arikawa (2007) attempt to reformulate Miyagawa’s (1989) Mutual C-command analysis within this Minimalist Program framework, and assume that an NP and a quantifier modifying it form a single constituent of NumP (Number Phrase), as shown below (NQ<sub>s</sub> stands for an NQ modifying the subject).



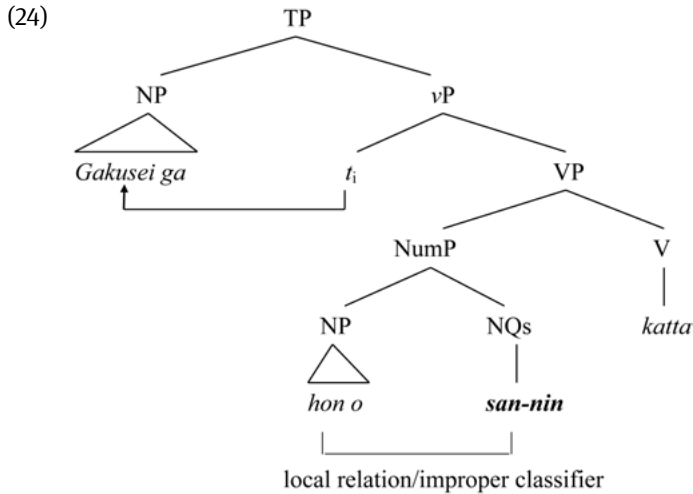
Miyagawa and Arikawa (2007) then assume that (7a) is derived as follows.



Based on Kuroda’s (1980) and Haig’s (1980) original observation that a quantifier and the NP that it modifies must observe strict locality (i.e. they must be adjacent

to each other), Miyagawa and Arikawa (2007) contend (i) that the trace ( $t_i$ ) of *gakusei ga* and *san-nin* are in strict locality in (23), and (ii) that *-nin* of *san-nin* is a proper classifier used for counting people; hence the sentence is acceptable.

Miyagawa and Arikawa (2007) postulate the following structure for (7b).



In this structure, the subject NQ *san-nin*, though adjacent to *hon o*, structurally functions as an object NQ; thus Miyagawa and Arikawa claim that the unacceptability of (7b) hinges on the clash in agreement between the object NP *hon o* and the subject NQ *san-nin*.

Miyagawa and Arikawa (2007) further claim that even a sentence such as (7b) improves considerably if the speaker pauses between the object NP and the subject NQ, thereby introducing a prosodic phrase break before the subject NQ.

- (25) ?*Gakusei ga hon o* [PAUSE] ***san-nin*** *katta*. (cf. 7b)  
 student NOM book ACC 3-CLF<sub>human</sub> bought  
 'Three students bought books.'

In response to sentences such as (26) that were raised as counterexamples to Miyagawa (1989) by Gunji and Hashida (1998) and others, Miyagawa and Arikawa (2007) argue that there is a prosodic phrase break immediately after the object, just like (25).

- (26) ?*Gakusei ga sake o* [PAUSE] *imamadeni* ***san-nin*** *nonda*.  
 student NOM sake ACC so.far 3-CLF<sub>human</sub> drank  
 'Three students so far drank *sake*.' (Gunji and Hashida 1998: 57)

As a result, *hon o/sake o* and *san-nin* in (25) and (26) are produced in separate prosodic phrases (unlike (7b) and many other examples). Miyagawa and Arikawa (2007) argue that this prevents the subject NQ from being inappropriately construed as part of the object; hence acceptability.<sup>7</sup>

However, Miyagawa and Arikawa's (2007) analysis still seems to encounter a number of serious empirical problems. Observe first the following contrast.

- (27) a. \***Gakusei** *ga* [*sake o* **san-nin**] *nonda*.  
 student NOM sake ACC 3- CLF<sub>human</sub> drank  
 'Three students drank sake.' (Miyagawa and Arikawa 2007: 660)
- b. **Miseinen no** **gakusei** *ga* [*sake o* **san-nin**] *nonda*.  
 underage GEN student NOM sake ACC 3- CLF<sub>human</sub> drank  
 'Three underage students drank sake.'
- c. *Gakusei ga* [*sake o* **san-nin**], [*uisukii o*  
 student NOM sake ACC 3- CLF<sub>human</sub> whisky ACC  
**go-nin**], [*burandee o* **huta-ri**] *nonda*.  
 5- CLF<sub>human</sub> brandy ACC 2- CLF<sub>human</sub> drank  
 'Three students drank sake, five drank whisky, and two drank brandy.'

Although (27a) is unacceptable, (27b) is considerably better than (27a) and is judged acceptable or nearly so, in spite of the fact that *sake o san-nin* is uttered in one breath. (27a), unacceptable in isolation, also becomes acceptable if placed in a context such as (27c), where there is no pause between the object and the subject NQ. The acceptability of (27b, c) fails to be captured by Miyagawa and Arikawa's (2007) analytical framework.

Observe further the following sentence, one of the examples presented by Naito (1993: 75) as counterexamples to Miyagawa (1989).

- (28) *Gakusei ga Chomsky no hon o* **go-nin** *katta*.  
 student NOM Chomsky GEN book ACC 5- CLF<sub>human</sub> bought  
 'Five students bought Chomsky's book.'

In what kind of prosodic pattern is (28) produced? There seem to be two possibilities. In one pattern, [*Chomsky no hon o go-nin*] is produced in a single prosodic phrase, as in *Gakusei ga* [*Chomsky no hon o go-nin*] ([*Langacker no hon o san-nin*]) *katta*.

<sup>7</sup> Miyagawa and Arikawa (2007) argue that sentences such as (25) and (26) with a pause immediately after the object are derived as a result of the double scrambling of the object and the subject, though I do not go into the technical details here. What is important here is Miyagawa and Arikawa's new observation that even the sentence pattern of (7b), which has long been said to be unacceptable, improves considerably if a pause is inserted immediately after the object.



‘Five students bought Chomsky’s book (and three bought Langacker’s),’ in which it is contextually assumed that *Chomsky no hon* is contrasted with other books. In another pattern, in which there is no such contextual assumption, [*go-nin katta*] is produced in a single prosodic phrase, as in *Gakusei ga Chomsky no hon o* [PAUSE] [*go-nin katta*]. What is noteworthy here is that sentence (28) is acceptable regardless of which of these two prosodic patterns it has, and that the former prosodic pattern, in which [*Chomsky no hon o go-nin*] is produced in a single prosodic phrase, is judged by many speakers to have higher acceptability status than the latter prosodic pattern, in which the object NP and the subject NQ are produced in separate prosodic phrases. Miyagawa and Arikawa’s (2007) analysis cannot account for the acceptability of the former prosodic pattern, though it can account for that of the latter.

## 4.2 An alternative functional account<sup>8</sup>

Takami and Kuno (2002: Chapter 8) and Kuno and Takami (2003) have proposed the following functional constraint on the relation between an NQ and its associated NP.

### (29) Functional Constraint on the Positions of NQs

No element representing information newer (more focused) than the NQ can be placed between the NQ and its associated NP (or the NP’s trace when it is moved leftward).

The default position of an NQ is immediately to the left of its associated NP as shown in (30a).

- (30) a. *San-nin no gakusei ga kyoo kenkyuusitu ni kita.*  
           3- CLF<sub>human</sub> GEN student NOM today office to came  
           ‘Three students came to my office today.’
- b. *Gakusei ga san-nin kyoo kenkyuusitu ni kita.*  
           student NOM 3- CLF<sub>human</sub> today office to came
- c. *Gakusei ga kyoo san-nin kenkyuusitu ni kita.*  
           student NOM today 3- CLF<sub>human</sub> office to came

In Japanese, words in a sentence that is pronounced without any conspicuous emphatic stress are arranged in such a way that those that represent older (more predictable from the preceding context) information appear closer to the beginning of the sentence, and those that represent newer (less predictable from the preceding context) information appear closer to the end of the sentence. This word order principle is often referred to as the “From-Old-to-New Principle” (Kuno 1978). Because

<sup>8</sup> I am indebted to Susumu Kuno for his discussion with me on the content of this subsection.

of this principle, given a sentence without any conspicuous emphatic stress anywhere, either the verb or a constituent immediately to the left of the verb is taken to be the focus of the sentence (see Kuno 1978). When an NQ appears separated from its associated NP and closer to the end of the sentence as in (30c), it acquires a stronger degree of focus than when it is in its default position, due to the above word order principle. Thus (30c) doesn't just mean 'Three students came to my office today,' but it means 'As many as three students came to my office today,' or 'A certain number of students came to my office today, and that number is as many as three.'

With the Functional Constraint given in (29) in mind, let us first observe (27a, b), repeated here.

- (27) a. \***Gakusei** ga [sake o **san-nin**] nonda.  
 student NOM sake ACC 3- CLF<sub>human</sub> drank  
 'Three students drank sake.' (Miyagawa and Arikawa 2007: 660)
- b. **Miseinen no gakusei** ga [sake o **san-nin**] nonda.  
 underage GEN student NOM sake ACC 3- CLF<sub>human</sub> drank  
 'Three underage students drank sake.'

In (27b), underage students' drinking sake is considered to be an extraordinary matter, and therefore deserves special emphasis on how many students were involved. In other words, *miseinen no gakusei* 'underage students' and *san-nin* form a conceptual unit as an answer to an implicit question {who, how many involved} about the act of drinking sake. Therefore, both represent new information, and the intervening object *sake o* is interpreted as older information. This satisfies the Functional Constraint in (29) because there is no intervening element representing information newer than the NQ between the subject and the NQ, and the acceptability of (27b) results. In (27a), on the other hand, students' drinking sake is considered to be a commonplace event, and therefore {commonplace event, the number of agents involved} does not form a conceptual unit. As a result of this, when a given sentence describes a commonplace action that a group of people have undertaken, how many of them were involved is not worthy of special mention. Therefore, when (27a) is uttered in isolation, the intervening object *sake o* between the subject and its NQ is not interpreted as older information than *san-nin*, hence the unacceptability, in violation of the Functional Constraint in (29). (The unacceptability of (7b) is explained in the same manner.)

Observe next (27c), repeated below.

- (27) c. *Gakusei* ga [sake o **san-nin**], [uisukii o  
 student NOM sake ACC 3- CLF<sub>human</sub> whisky ACC  
**go-nin**], [burandee o **huta-ri**] nonda.  
 5- CLF<sub>human</sub> brandy ACC 2- CLF<sub>human</sub> drank  
 'Three students drank sake, five drank whisky, and two drank brandy.'

Here, the different kinds of liquor that students drank and the number of students who drank each kind are being contrasted. That is, *sake o san-nin* is interpreted as constituting a {liquor, the number of students who drank it} pair contrasted explicitly with other such pairs as *uisukii o go-nin* and *burandee o huta-ri*. In this mode of contrastive statistical reporting, the speaker and the hearer can readily interpret such a pair as constituting a conceptual unit.

Contrastive pairs of the form of {x, y} (e.g. {liquor, the number of students who drank it}) are answers to an explicit or implicit multiple *wh*-word question of the form of {*wh*-x, *wh*-y} (e.g. {what beverage, how many students drank it}). *Wh*-x and *wh*-y in the question represent the strongest focus information, and the constant values (i.e. x, y) that have replaced them represent the strongest focus information in the answer. In (27c), an object intervenes between the subject and its NQ, but since the Functional Constraint in (29) bans the presence of an intervening element between the NQ and its associated NP that is newer than the NQ, but not the presence of an element that is of the same degree of newness as the NQ, (27c) does not violate the Functional Constraint. The sentence is acceptable for this reason.

Note that when (27a) is given in isolation, *sake o san-nin* is not ordinarily interpreted as a member of contrastive pairs. That is, it does not constitute a conceptual unit. This conjecture seems to be supported by the acceptability of (28), repeated here.

- (28) *Gakusei ga Chomsky no hon o go-nin katta.*  
 student NOM Chomsky GEN book ACC 5-CLF<sub>human</sub> bought  
 'Five students bought Chomsky's book.'

Statistical reporting on whose books are selling well is a very common practice. Therefore, *Chomsky no hon o go-nin* can be readily interpreted as constituting a {book title, the number of copies sold} pair contrasted either explicitly or implicitly with other such pairs. In this mode of contrastive statistical account, {book title, the number of copies sold} forms a conceptual unit. Thus, *Chomsky no hon* and *go-nin* represent the strongest focus information, and (28), just like (27c), results in acceptability, in keeping with the Functional Constraint in (29).

I would like to point out here that the Functional Constraint can also account for the near acceptability of (25), repeated here.

- (25) ?*Gakusei ga hon o* [PAUSE] *san-nin katta.* (cf. 7b)  
 'Three students bought books.'

The pause in (25) functions to signal a shift from the old-information part to the new-information part of the sentence. *Hon o*, understood or inferred from the preceding discourse, represents old information, and is presented earlier in the sentence. Then the focus information (i.e. *san-nin*) is presented after the prosodic break. On this

interpretation, *hon o*, which intervenes between the NQ and the subject NP, does not represent information newer than the NQ, and therefore the sentence does not violate the Functional Constraint.

The Functional Constraint can also account for (21a, b) and (26), repeated below.

(21) Unaccusative/Unergative distinction

- a. *Kyaku ga<sub>i</sub> [VP ryokan ni t<sub>i</sub> **huta-ri** tuita].*  
 guest NOM inn to 2-CLF<sub>human</sub> arrived  
 'Two guests arrived at the inn.'
- b. \**Kodomo ga [VP geragerato **huta-ri** waratta].*  
 children NOM uproariously 2-CLF<sub>human</sub> laughed  
 'Two children laughed uproariously.'

- (26) ?*Gakusei ga sake o [PAUSE] imamadeni **san-nin** nonda.*  
 student NOM sake ACC so.far 3-CLF<sub>human</sub> drank  
 'Three students so far drank sake.'

(21a) describes how many guests arrived at the inn, and therefore the NQ *huta-ri* represents the strongest focus information; the intervening element *ryokan ni* 'at the inn' between the NQ and the subject represents older information. Hence the acceptability of the sentence, satisfying the Functional Constraint. The acceptability difference between (21b) and (26) is attributable to the difference between the manner adverb (VP-adverb) *geragera to* 'uproariously' in (21b) and the scene-setting adverb (sentence adverb) *imamadeni* 'so far' in (26). It is well known that manner (as well as instrumental) adverbs ordinarily represent new information, while scene-setting adverbs (temporal and locative adverbs) cannot receive focus information. Therefore, the Functional Constraint marks (21b) in isolation as unacceptable because *geragera to* represents information newer than the NQ *huta-ri*, in violation of the Functional Constraint. On the other hand, it marks (26) as acceptable or nearly so because *imamadeni* does not represent information newer than *san-nin*. Note also that in (26) the object *sake o*, just like *hon o* in (25), does not represent information newer than *san-nin*, either, since it is immediately followed by a pause.

The reader may have already been aware that the Functional Constraint in (29) fails to account for the unacceptability of (20b), an example of quantifier float from an adjunct phrase, repeated here.

- (20) b. \**Gakuseitati wa [VP [PP kuruma de] **ni-dai** kita].*  
 student TOP car with 2-CLF<sub>machine</sub> came  
 'Students came in two cars.'

Note that quantifier float from an adjunct does not necessarily result in unacceptability, as shown in (31) and (32b).

- (31) *Gakusei wa* [<sub>VP</sub> [<sub>PP</sub> *torakku de*] ***ni-dai*** *gomi o hakonda*].  
 student TOP truck with 2-CLF<sub>machine</sub> waste ACC carried  
 ‘The students carried waste in two trucks.’
- (32) a. \**Hito ga* [<sub>VP</sub> [<sub>PP</sub> *tiisai mura kara*] ***huta-tu*** *kita*].  
 person NOM small village from 2-CLF<sub>inanimate</sub> came  
 ‘People came from two small villages.’ (Miyagawa 1989: 31)
- b. *Boku wa gantan ni* [<sub>VP</sub> [<sub>PP</sub> *osiego*  
 I TOP New.Year’s.day on former.student  
*kara*] ***go-nin*** *nengazyoo o moratta*].  
 from 5-CLF<sub>human</sub> New.Year’s.card ACC received  
 ‘I received New Year’s cards on the first day of the year from five former students.’

(20b) and (32a) are totally unacceptable, much worse than examples such as (7b), (21b), and (27a). But (31) and (32b) are acceptable or nearly so, in spite of the fact that a PP node intervenes between a quantifier and its associated NP.

The unacceptability of (20b) and (32a) seems to be attributable to the basic semantic condition that the intended meaning of a sentence must be properly understood and readily reconstructed from the surface structure of the sentence. In (20b), the floated *ni-dai* tends to be wrongly interpreted as the subject of the verb *kita* ‘came’, as in ‘Two (cars) came.’ But this is not the intended meaning of the sentence, since the subject of the sentence is *gakusei* ‘students’, hence unacceptability. Similarly, in (32a), the floated *huta-tu* tends to be wrongly interpreted as the subject of *kita*, thereby resulting in a clash with the intended subject *hito ga*; hence unacceptability. In (31), on the other hand, the floated *ni-dai*, due to being adjacent to *gomi o*, is properly understood as ‘waste in two trucks’ and the intended meaning of the sentence is readily reconstructed. The same is the case with (32b). Hence these sentences are acceptable.<sup>9</sup>

### 4.3 Quantifier float in English

The above basic semantic condition (i.e. the intended meaning of a sentence must be properly understood and readily reconstructed from the surface structure of the sentence) seems to play an important role in deciding the acceptability of quantifier float in English, as well. Observe the following contrasting pairs of sentences.

<sup>9</sup> See Katagiri (1991) and Hamano (1997), who give acceptable quantifier float examples from *-ni* ‘to’-marked adjunct phrases, which should be predicted to be unacceptable by Miyagawa’s (1989) Mutual C-command Requirement.

- (33) a. John persuaded the women **each** to visit Paris.  
       b. \*John promised the women **each** to visit Paris.
- (34) a. Bill regarded his friends **all** as intelligent.  
       b. \*Bill impressed his friends **all** as intelligent.
- (35) a. Sue found the two rooms **both** empty.  
       b. \*Sue left the two rooms **both** angry.

In these examples, the associated NPs of the quantifiers *each*, *all* and *both* are the object NPs, but the (a) examples are acceptable, while the (b) examples are not. Maling (1976) has observed, in conjunction with Visser's Generalization (=Object control verbs like *persuade* can be easily passivized, whereas subject control verbs like *promise* cannot), that quantifier float does not apply to the object NP if the following phrase is a complement predicated of the subject NP. In (33a), the complement (*PRO*) *to visit Paris* is predicated of the object NP *the women*, whereas in (33b), it is predicated of the subject NP *John*. Likewise, *intelligent* in (34a) is predicated of the object NP *his friends*, but in (34b) it is predicated of the subject NP *Bill*. The same applies to (35a, b). From this type of contrast, Maling (1976) states that "while it is not obvious how to state the semantic restrictions precisely, it appears that Q-Floating can apply only if the following phrase can reasonably be associated (semantically) with the NP that the quantifier binds" (p. 716).

But why is it the case that quantifier float can apply only if the following phrase can reasonably be associated with the NP that the quantifier binds? In Section 3, we observed that floated quantifiers in English function as appositive pronouns for their associated NPs, denoting the same referent. Then, in (33a) *each*, as an appositive pronoun for *the women*, is properly understood as the agent (subject) of visiting Paris, and the intended meaning of the sentence is easily reconstructed, since John persuaded each of the women to visit Paris. In (33b), on the other hand, since John promised each of the women to visit Paris, it is John, not the women, who visits Paris. In spite of this, *each*, as an appositive pronoun for *the women*, is wrongly interpreted as the agent of visiting Paris. Therefore, the intended meaning of the sentence cannot easily be reconstructed; hence it is unacceptable. (34a, b) and (35a, b) can be explained in the same manner, as partly shown in the following.

- (36) a. Bill regarded his friends **all** as intelligent. (=34a)  
           |—————|—————|
- b. \*Bill impressed his friends **all** as intelligent. (=34b)  
           |—————|———**x**———|

The quantifier *all* in (36a) is followed by its appropriate predicate, and therefore all his friends are interpreted as intelligent, which is what Bill thought. In (36b), on the other hand, all his friends tend to be interpreted as intelligent, but this results in a clash with the intended meaning of Bill as intelligent, hence unacceptable.

Observe further the following examples.

- (37) a. His parents were both invited to the ceremony.

\_\_\_\_\_

- b. \*His parents were invited to the ceremony both.

In (37a), the quantifier *both* whose associated NP is the subject *his parents* is followed by the predicate *invited to the party*, and therefore the intended meaning is properly understood and is readily reconstructed. In (37b), on the other hand, *both* is stranded at the end of the sentence and is not followed by any predicate. Therefore, it seems practically impossible to reconstruct the intended meaning; and hence the sentence is unacceptable. (The unacceptability of (15a, b) is explained in the same way.)

## 5 Conclusion

In this chapter I have first shown that quantifiers in Japanese are best considered to be base-generated at their surface positions without any movement from their associated NPs, and that this seems to suggest that quantifiers in English should also be considered to be base-generated as well. Next, I have shown that floated quantifiers in English are restricted to universal quantifiers such as *all*, *each*, and *both*, while those in Japanese include not only universal but also existential and numeral quantifiers. This difference has been shown to be attributable to the different roles that floated quantifiers play in the two languages. In English, a floated quantifier, serving as an appositive pronoun, represents the same referent as its associated NP and identifies the referent once again, while in Japanese it specifies or restricts the number or amount of the referent of its associated NP. Because of this difference, the referent of the associated NP of a floated quantifier in English has to be known to both the speaker and the hearer, but it does not have to be in Japanese.

In Section 4, I have discussed how to capture the relation between floated numeral quantifiers and their associated NPs in Japanese. After critically reviewing syntactic analyses by Miyagawa (1989) and Miyagawa and Arikawa (2007), I have argued that this phenomenon can be accounted for more appropriately in functional terms. I have further shown that the basic semantic condition that the intended meaning of a sentence must be properly understood and readily reconstructed from the surface structure of the sentence also plays an important role in deciding the acceptability of quantifier float sentences in both Japanese and English.

Finally let me say a few words here about syntactic and functional analyses. Syntactic analyses of language contribute to a fuller understanding of the syntactic structures of the language and of the grammatical relations of the elements placed in a sentence, among others. Functional (semantic, discourse-based, or pragmatic) analyses, on the other hand, contribute to a fuller understanding of the semantic relations of the elements placed in a sentence and of nonsyntactic factors controlling the speaker's utterances, among others. This chapter has shown that semantic and information-based factors rather than syntactic ones play crucial roles in accounting for the acceptability status of quantifier float in Japanese and English. But, in general, when faced with a certain linguistic phenomenon, we do not know at first what factors (syntactic or nonsyntactic) are responsible for the phenomenon. Therefore, it is important to collect a large number of examples of the phenomenon, and to always bear in mind that a given sentence is just as likely to be acceptable or unacceptable for nonsyntactic reasons as for syntactic ones. There are of course phenomena that are controlled by the interaction of syntactic and functional factors. Thus, to account for such complex phenomena, it seems essential for us to be aware of various nonsyntactic factors that are known to interact with syntax, and to be constantly on guard to see if these factors are present.

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# 16 Measure nouns and numerals

## 1 Introduction

Measure nouns are strongly tied to the notion of number. They include the following types of standard measuring units and some additional ones:

- (1) Measure nouns
  - a. time: *year, month, week, day, hour, etc.*
  - b. length: *mile, foot, inch, etc.*
  - c. weight: *ton, pound, etc.*
  - d. money: *dollar, pound, etc.*

These are used together with a numeral to express quantities in relation to measurement. A close look at measure nouns, therefore, allows us to gain insights into how natural language deals with number.

Measure nouns in Japanese such as *meetoru* ‘meter’ and *nen* ‘year’ exhibit a curious property of being linked directly to a numeral without the mediation of a classifier, as in *yon meetoru* ‘four meters’, unlike ordinary nouns in the language. A key to understanding this peculiarity is a precise formal analysis that takes into account crosslinguistic patterns. Typological studies observe that measure nouns tend to lack plural marking. Japanese counterparts can be made to fit this pattern if the feature content of measure nouns and classifiers is taken into account. Comparison with numerical bases is particularly illuminating in this respect, since they also tend to be devoid of plural marking crosslinguistically and are combined with a basic numeral without the help of a classifier in Japanese (as in *yon hyaku* ‘four hundred’). This comparison leads to the discovery that measure nouns and numerical bases in Japanese share the ability to allow 1-deletion, which has been associated only with numerical bases in the crosslinguistic survey. Even though superficial similarities of measure nouns and numerical bases at the morphological level are noted for other languages as well in the recent literature (Acquaviva 2006, 2008), the discussion has not been extended to matters of syntax such as the combinability with the numeral meaning ‘one’. Japanese measure nouns enable us to explore the conditions that license the appearance of a numeral outside the domain of numerical bases. The overall analysis will highlight the significant role that number features play in this domain. Among various types of measure nouns, expressions of temporal units exhibit very intriguing complexities, providing important clues as to the nature of measure nouns in general.

In the literature on classifiers, measure nouns are often treated as mensural classifiers (Lyons 1977), as opposed to ordinary sortal classifiers, which are strongly tied to particular subcategories of nouns. In Japanese, too, measure nouns give the impression of being classifiers due to the fact, mentioned above, that they directly follow a numeral. Compare the two expressions in (2).

- (2) a. *yon-meetoru*  
       four-meter  
       ‘four meters’
- b. *yon-satu* (*no hon*)  
       four-CLF (GEN book)  
       ‘four (books)’

Allan (1977) claims that measure expressions are classifiers, pointing to a shared word order pattern in Thai. In the past, Japanese measure nouns have often been treated as a subtype of classifier, too, as can be seen from the literature survey by Miho (2010: introduction). The recent consensus in typological studies (Aikhenvald 2000; Croft 1994; Downing 1996; Grinevald 2004; Simpson 2005), however, is that they should be treated as distinct in nature from ordinary classifiers since they find counterparts in classifier-less languages like English. Commenting on Chinese, Gebhardt (2011) states that mensural “classifiers” are not classifiers but nouns. See also Cheng and Sybesma (1998). In order to clarify the nature of measure words in Japanese, it is imperative to have a fairly comprehensive picture of their grammatical behavior in classifier-less languages.

It is well known in the study on languages like English that phrases headed by a measure noun exhibit characteristic syntactic properties when they modify adjectives and adpositions. In contrast, not much work has been done until recently about what is going on in Japanese, apart from Okutsu’s (1974) discussion of measure phrases in relation to adpositional phrases. Okutsu’s pioneering work itself also suffers from the failure to recognize the fact that he is dealing with adpositional phrases. Semantic properties of measure phrases in the clausal domain, however, are now beginning to attract serious theoretical attention (Nakanishi 2007; Sawada and Grano 2011). This chapter will draw on insights from recent syntax research to show that measure phrases in Japanese function in the same way as their counterparts in languages like English, lending support to the idea that measure nouns in Japanese are comparable to those in classifier-less languages.

I will start by presenting evidence that measure nouns are nouns in Section 2. Sections 3 and 4 take up measure nouns and classifiers, analyzing their relation to numerals in terms of number features. Section 5 brings in numerical bases, to which measure nouns are compared in Section 6. Section 7 turns to measure phrase modification of adjectives and adpositions. Section 8 concludes.

## 2 A silent measure noun: Human age

Is there Japanese-internal evidence that measure words are indeed nouns? A positive answer comes from expressions having to do with human age. An interesting characteristic of Japanese is that a special form of the item meaning ‘year (of age)’, *sai*, must be used as in (3) to express the age of human beings (and anthropomorphized animals).

- (3) a. *Hanako wa nana-sai da.*  
       Hanako TOP seven-year COP  
       ‘Hanako is seven years old.’
- b. \**Hanako wa nana-nen da.*  
       Hanako TOP seven-year COP

Otherwise, the form of ‘year’ is *nen* as shown in (4).

- (4) *Kono ki wa zyurei ni-hyaku-nen da.*  
       this tree TOP tree.age two-hundred-year COP  
       ‘This tree is two hundred years old.’

Curiously, there is an alternative way of saying the same thing as (3a) without using a Japanese counterpart of *year(s)*. Consider (5).

- (5) *Hanako wa nana-tu da.*  
       Hanako TOP seven-CLF COP

Here, the numeral for seven is directly followed by the general default numeral classifier *tu* (Zubin and Shimojō 1993), but there is no word that corresponds to *year*. The sentence nevertheless means that Hanako is seven years old. English exhibits an analogous phenomenon. (6) means John is seven years old though the word *year* is not used.

- (6) *John is seven.*

Kayne (2005: Ch. 10) proposes an analysis of (6) according to which a silent noun YEAR (capitalized to indicate that it is not pronounced) occupies the position where *year(s)* is expected. Almost the same analysis can be adopted for Japanese (Watanabe 2012): there is a silent noun YEAR after the numeral-classifier combination. If YEAR is a noun, it is not surprising that a classifier is inserted after the numeral in (5). And since overt measure words do not take a classifier, YEAR needs to count on the default item. Compare (7), where the same default classifier is used.

- (7) *Hako ga nana-tu aru.*  
 box NOM seven-CLF is  
 ‘There are seven boxes.’

If YEAR does not differ from overt measure words in categorial status, it follows that measure words are nouns in Japanese after all.

The initial puzzle remains, however. Unlike ordinary nouns or YEAR, *meetoru* in (1a), *sai* in (3a), and *nen* in (4) come right after the numeral without an intervening classifier. To understand what is going on, we need to take a crosslinguistic perspective on the nature of measure nouns.

### 3 Plural marking of measure nouns

It is well known that measure nouns tend to lack plural morphology. In Swedish, where ordinary count nouns make a singular–plural distinction, measure nouns do not display such a distinction.

- (8) Swedish (Holmes and Hinchliffe 2000)
- |    |                     |   |                         |
|----|---------------------|---|-------------------------|
| a. | <i>en kilometer</i> | ~ | <i>femtio kilometer</i> |
|    | ‘one kilometer’     |   | ‘fifty kilometers’      |
| b. | <i>en fot</i>       | ~ | <i>två fot</i>          |
|    | ‘one foot’          |   | ‘two feet’              |

Similarly, some German measure nouns such as *Pfund* ‘pound’, *Gramm* ‘gram’, and *Fuss* ‘foot’ remain singular when the plural form is expected (Acquaviva 2006). The same is true with a minority of measure nouns in Scottish Gaelic such as *là* ‘day’ and *bliadhna* ‘year’ (Greene 1992). In Early Modern English, too, measure words tend to be used without plural marking until the end of the eighteenth century (Lass 1999). The four classes of measure nouns in (1) are indeed the ones that Jespersen (1954 [1914]) lists under the heading of the unchanged plural.

### 4 Featural characterization of measure nouns

Given the pervasive characteristic of measure nouns reviewed above, it is quite tempting to connect the absence of classifiers associated with Japanese measure nouns (except for YEAR) to the absence of number marking. The key to this connection is the theory of number features. Once the conditions for the appearance of classifiers are captured in terms of features, it becomes possible to explain why measure nouns in Japanese are generally used without a classifier.

## 4.1 Number features

Let us first lay down the system of number features as the background for discussion. Two features are involved in defining the number categories of singular, dual, and plural.

- (9) Number features (Harbour 2011a, 2011b; Nevins 2011; Noyer 1997)
- a. Singular: [+singular, –augmented]
  - b. Dual: [–singular, –augmented]
  - c. Plural: [–singular, +augmented]

The combination [+singular, +augmented] is impossible, given the following definitions of individual features:

- (10) Feature definitions
- a. [+singular] =  $\lambda x[\text{atom}(x)]$
  - b. [+augmented] =  $\lambda P. \lambda x: P(x). \exists y[P(y) \wedge y \subset x]$

The minus value is given as negation of the plus value. Informally speaking, [+augmented] picks out non-minimal entities in the domain already specified with respect to [±singular]. Since only one numerical value corresponds to [+singular], only [–augmented] is combinable with it. (10b) is the version that uses a subset relation. Harbour (2011b) substitutes a part relation. “ $\lambda x: P(x)$ ” means that *P* is a presupposition on *x*. Harbour opts for the use of the part relation instead of the subset relation in the definition of [+augmented] to capture the link with the aspect domain. The subset relation suffices here because we are dealing with a discrete system when we distinguish among singular, dual, and plural. We will see later on, though, that the part-whole relation entailed by [+augmented] seems to play an important role when we try to extend the empirical coverage.

## 4.2 Measure nouns vs. numeral classifiers

The next step is to characterize the conditions that enable numeral classifiers to appear in terms of number features. Watanabe (2010) puts forth the following proposals:

- (11) Numeral classifiers and numerals in Japanese
- a. A numeral classifier appears only when both [±singular] and [±augmented] are specified.
  - b. [±augmented] always selects a numeral in Japanese.

(11a) receives support from the fact that there is a classifier that changes shape according to the number value.

- (12) a. *hito-ri*  
one-CLF
- b. *huta-ri*  
two-CLF
- c. *san-nin*  
three-CLF
- d. *yo-/go-/roku-/nana-nin*  
four-/five-/six-/seven-CLF

The classifier for counting human beings has two forms: *ri* for singular and dual, and *nin* for plural. Given the number system in (9), one can say that *ri* is the special form for [–augmented].

(11a) and (11b) combined, it is guaranteed that classifiers in Japanese must be accompanied by a numeral. This is a parametrized property of Japanese classifiers, since Chinese classifiers can be used without a numeral (Cheng and Sybesma 2005).

Now, it is easy to see why measure nouns in Japanese generally occur without a classifier. Suppose they lack the [±singular] specification. On the assumption that classifiers reflect the number specification of the head noun, (11a) prohibits the appearance of a classifier in the case of measure nouns. The only exception is the unpronounced noun YEAR, discussed in Section 2, specialized for counting human age. Recall that YEAR is used together with the default classifier *tu*. This means that both [±singular] and [±augmented] are specified for YEAR.

The hypothesis that (overt) measure nouns in Japanese lack the [±singular] specification receives interesting support from the suppletion exhibited by the noun meaning ‘day’.

- (13) a. *iti-niti*  
one-day  
‘one day’
- b. *hutu-ka, mik-ka, yok-ka, ..., too-ka*  
two-day three-day four-day ten-day  
‘two days’ ‘three days’ ‘four days’ ‘ten days’
- c. *zyuu-iti-niti, zyuu-ni-niti, ..., zyuu-go-niti, ..., san-zyuu-niti*  
ten-one-day ten-two-day ten-five-day three-ten-day  
‘eleven days’ ‘twelve days’ ‘fifteen days’ ‘thirty days’



The generalization is that a special form *ka* is used from two to ten, putting aside further idiosyncrasies found with *zyuu-yok-ka* ‘fourteen days’ and *hatu-ka* ‘twenty days’. An important point is that the line between (13a) and (13b) can be drawn without using the [±singular] specification. In the absence of [±singular], [–augmented] corresponds to singular, and [+augmented] to plural (Harbour 2011a), given that they range over natural number domains. One can then say that *ka* is the form for [+augmented]. A complication is that this [+augmented] form is limited to simplex numerals. For complex numerals involving a numerical base plus an additional digit numeral from one to nine, the general form *niti* must be used as in (13c). This number distinction looks baroque, but it is also a general characteristic of the number system in Maltese involving the singular-plural opposition (Watanabe 2010).

Though the noun meaning ‘day’ is the only measure word in Japanese that exhibits suppletion in a way sensitive to what numeral comes in front of it, it is striking that the division made in the range up to ten is not between two and three, unlike the classifier for counting human beings. This behavior is explained in a principled way by assuming that measure nouns are not specified with respect to [±singular], without which [±augmented] makes a two-way distinction between singular and plural. Interestingly, pre-modern Japanese draws the same line, despite the fact that details of the entire morphological system for ‘day’ are somewhat different. What is constant is the direct combination of a numeral with the measure noun, which only allows the singular-plural divide. See Yasuda (2015) for details.

### 4.3 Measure words as count nouns

Let me add that measure nouns behave exactly as count nouns are expected to; they can be directly combined with a numeral. On the basis of this intuition, it is often claimed that non-measure nouns in classifier languages are mass (Chierchia 1998), since they require the presence of a classifier. Recall, however, that the unpronounced measure noun YEAR is used with a classifier. Since there is no principled reason for distinguishing YEAR from the rest of measure nouns with respect to the mass/count status, it follows that they all should be treated as count nouns regardless of whether they are accompanied by a classifier or not and that count nouns in languages without classifiers and their counterparts in classifier languages are no different.

The characterization of classifiers in (11a) is also in line with this view. The direct combination of measure nouns with a numeral is simply due to the absence of a feature ([±singular]) that is required for overt realization of a classifier. YEAR is exceptional in being specified with respect to [±singular]. In other words, the intuition that count nouns can be directly combined with a numeral needs to be cashed out in theoretical terms, and once that is done, the intuition itself is of no use in analysis.

The presence of a classifier accompanying a numeral is nothing more than a morphological option available for a certain class of languages. For other arguments reaching the same conclusion, see Borer (2005), Muromatsu (2003), and Watanabe (2006), among others.

## 5 Numerical bases

Japanese has another set of lexical items that are combined directly with a numeral, namely, numerical bases such as *hyaku* ‘hundred’ and *sen* ‘thousand’.

- (14) a. *ni-hyaku*  
two-hundred  
‘two hundred’
- b. *nana-sen*  
seven-thousand  
‘seven hundred’

Numerical bases behave like nouns, as can be clearly seen in languages with active gender agreement (Hurford 2003). In Welsh, for example, *chant* ‘hundred’ is masculine, whereas *mil* ‘thousand’ is feminine. This difference in inherent gender is reflected in lower-valued digit numerals, which agree in gender with head nouns in ordinary nominal projections, when they are put together with a base to form a complex numeral.

- (15) Welsh (Hurford 2003)
- a. *tri chant*  
three.M hundred  
‘three hundred’
- b. *tair mil*  
three.F thousand  
‘three thousand’

In English, the noun-like nature of these words can be seen in their ability to take the plural form, as in *thousands of books* (cf. Kayne 2010: Ch. 3). At the same time, they remain singular when combined with a basic numeral, as indicated by the English translations given in (14) and (15). The same is true with *dusan* ‘dozen’, *fichead* ‘twenty’, *ceud* ‘hundred’, and *mile* ‘thousand’ in Scottish Gaelic (Greene 1992). Thus, numerical bases are quite similar to measure nouns, as remarked by Acquaviva (2006).

Once we recognize this similarity, it becomes possible to apply to numerical bases the account, discussed in Section 4.2, of why measure nouns are directly combined with a numeral without the help of a classifier. Numerical bases in Japanese also lack the [ $\pm$ singular] specification, blocking the appearance of a classifier in accordance with (11a).

Acquaviva (2006) coins the term “unit nouns” to refer to measure nouns and numerical bases as a class and goes so far as to analogize them to classifiers. In the case of numerical bases, however, there is no tradition of classing them together with genuine (sortal) classifiers. The reason is that when a complex numeral consisting of a numerical base and a basic numeral is combined with a noun, the complex numeral itself must be accompanied with a classifier appropriate for the head noun.

- (16) *hon ni-hyaku-satu*  
 book two-hundred-CLF  
 ‘two hundred books’

Since there can be only one classifier per noun, numerical bases cannot be classifiers.

The similarity of measure nouns and numerical bases, then, presents another argument that measure nouns are not classifiers. There is a further respect in which measure nouns and numerical bases go together as against classifiers, to which we turn next.

## 6 1-deletion

A fairly widespread phenomenon associated with numerical bases is so-called “1-deletion” (Hurford 1987, 2003), where a numerical base is used alone but multiplication by 1 is implied. The phenomenon, however, is not limited to numerical bases. Measure nouns, too, allow 1-deletion in the context of expressions that indicate a ratio. Close attention to this phenomenon in Japanese is quite revealing with regard to the nature of measure nouns.

### 6.1 Crosslinguistic patterns

There are two major generalizations concerning 1-deletion, according to Hurford (1987, 2003). First, it is obligatory for smaller bases, while it is impossible for bases with higher numerical values, with intermediate items displaying optionality, as the following German data illustrate:

- (17) 1-deletion in German
- a. *zehn* ~ \**ein zehn* (obligatory for 10)
  - b. *hundert* ~ *ein hundert* (optional for 100)
  - c. *tausend* ~ *ein tausend* (optional for 1,000)
  - d. \**Million* ~ *eine Million* (impossible for 1,000,000)

The same is true in Japanese.

- (18) 1-deletion in Japanese
- a. *zyuu* ~ \**iti-zyuu* (obligatory for 10)
  - b. *hyaku* ~ \**ip-pyaku* (obligatory for 100)
  - c. *sen* ~ *is-sen* (optional for 1,000)
  - d. \**man* ~ *iti-man* (impossible for 10,000)

At the same time, languages vary as to exactly where 1-deletion becomes optional or impossible.

The other generalization is related to suppletion found with numerical bases. In German, for example, 10 is *zehn*, whereas 40 is *vierzig* and 50 *fünfzig*. In other words, a special form is used only for 10, with *zig* being the regular form of the base 10. The same is true in English, the base for 10 alternating between *ten* and *ty*. Hurford (1987) observes that the special suppletive form invariably uses 1-deletion, pointing to languages like Hawaiian, where there is an additional idiosyncrasy for 20.

- (19) Hurford's generalization concerning suppletion and 1-deletion:  
1-deletion is used for the suppletive form of the numerical base.

- (20) Hawaiian (Hurford 1987)
- |   |             |            |                  |
|---|-------------|------------|------------------|
|   | 10          | <i>umi</i> |                  |
| 3 | <i>kolu</i> | 30         | <i>kana-kolu</i> |
| 4 | <i>ha</i>   | 40         | <i>kana-ha</i>   |
| 5 | <i>lima</i> | 50         | <i>kana-lima</i> |
| 6 | <i>ono</i>  | 60         | <i>kana-ono</i>  |

It is interesting to observe that the base for 10 is affected by suppletion in English, German, and Hawaiian. The two generalizations combined predict that suppletion should be impossible for higher numerical bases.

In Japanese, numerical bases are free from suppletion. The alternation shown in (18) is due to a semi-regular phonological process, which affects the numeral *iti*, too. When we turn to units of time, however, suppletion is rampant. Quite interestingly,

the pattern of 1-deletion turns out to be consistent with Hurford's generalization (19) in this domain, too.

## 6.2 Measure nouns in Japanese

Though I am not aware of any systematic treatment of this fact, 1-deletion is not limited to numerical bases. In Japanese, it figures prominently in the structure that expresses ratios with a measure noun, as in (21), where one can omit *iti* 'one'.

- (21) *(iti-)kiri san-zen-en no kome*  
 (one-)kilo three-thousand-yen GEN rice  
 'rice that costs three thousand yen per kilo'

In English, too, the noun following *per* appears without an article or a numeral, but the numerical value 1 is understood, as in the translation given for (21). In Japanese, the numeral *iti* can appear. In (21), there is no overt item meaning 'per'. Alternatively, one can use *ni-tuki*, *atari*, or *tan'i*, as in (22).

- (22) a. *iti-kiri ni tuki san-zen-en no kome*  
 one-kilo DAT attach three-thousand-yen GEN rice  
 b. *(iti-)kiri atari san-zen-en no kome*  
 (one-)kilo per three-thousand-yen GEN rice  
 c. *(iti-)kiri-tan'i san-zen-en no kome*  
 (one-)kilo-unit three-thousand-yen GEN rice

The possibility of 1-deletion seems to vary depending on which version is used. It is disallowed in (22a).

Turning to measure nouns corresponding to units of time, we find suppletion correlated with 1-deletion. Consider the following examples:

- (23) a. ***hi*** *ni san-kai no tooyaku*  
 day per three-time GEN medication  
 b. *iti-niti ni san-kai no tooyaku*  
 one-day per three-time GEN medication  
 'three medications per day'
- (24) a. ***syuu*** *ni san-kai no kaigi*  
 week per three-time GEN meeting  
 b. ***is-syuukan*** *ni san-kai no kaigi*  
 one-week per three-time GEN meeting  
 'three meetings per week'

(23a) and (24a) have the same interpretation as (23b) and (24b), respectively, though there is no numeral for ‘one’ in (23a) and (24a), to which such a numeral cannot be added. Crucially, the (a) version with 1-deletion and the (b) version without it use different forms of the measure nouns. The allomorph that triggers obligatory 1-deletion is also used together with a demonstrative as in (25).

- (25) a. *sono hi*  
           that day  
           ‘that day’
- b. *sono syuu*  
           that week  
           ‘that week’

The form *hi* belongs to the native Yamato vocabulary, while *niti*, *syuu*, and *syuukan* are all Sino-Japanese. Thus, this difference in vocabulary classification is not related to the way 1-deletion works. It should also be mentioned that the alternation between *syuukan* and *syuu* does not count as an instance of suppletion in the ordinary sense of the term. Rather it has to do with the presence or absence of the morpheme *kan*, the precise nature of which needs to be elucidated. In the featural analysis presented below, it will turn out that what matters is not suppletion but the feature content of measure nouns, with *kan* serving as the locus of a particular feature responsible for the appearance of a numeral.

Note incidentally that temporal units are quite unusual among measure nouns in being able to combine directly with a demonstrative. This property is related to the fact that temporal units form a core part of bare NP adverbs in the sense of Larson (1985). In fact, temporal units seem to be the only class of nouns that can head a bare NP adverb in Japanese.

Moving on to months, we find a slightly different pattern.

- (26) a. (*hito-*)***tuki***    *ni*    *san-kai*    *no*    *kaigi*  
           one-month    per    three-time    GEN    meeting
- b. *ik-kagetu*    *ni*    *san-kai*    *no*    *kaigi*  
           one-month    per    three-time    GEN    meeting  
           ‘three meetings per month’

In (26a), which expresses ‘one month’ with the native lexical items *hito* and *tuki*, 1-deletion is optional, unlike in the case of ‘day’ and ‘week’, though it is not allowed in (26b). For ‘year’, only a single form is involved, as in (27).

- (27) (*iti-*)**nen**    *ni*    *san-kai*    *no*    *kaigi*  
 one-year    per    three-time    GEN    meeting  
 ‘three meetings per year’

Again, 1-deletion is optional. (27) is parallel to (21).

Outside the domain of temporal units, allomorphy seems rare. But when it is found, it is correlated with 1-deletion, as in the following pair:

- (28) a. **rittaa**    *hyaku-go-zyuu-en*    *no*    *gasorin*  
 liter    hundred-five-ten-yen    GEN    gasoline
- b. *iti-rittoru*    *hyaku-go-zyuu-en*    *no*    *gasorin*  
 one-liter    hundred-five-ten-yen    GEN    gasoline  
 ‘gasoline that costs a hundred fifty yen per liter’

Although there may be idiolectal variation, 1-deletion is obligatory for me in the case of *rittaa*, which is intended to mimic the English pronunciation of *liter* more closely. On the other hand, *rittoru* does not allow 1-deletion.

### 6.3 Licensing of numerals

A first step to understanding the nature of Hurford’s generalization (19) concerning 1-deletion and suppletion, which turns out to hold in the domain of Japanese measure nouns as well, is to remember that morphological alternation is described in terms of number features in the case of the noun meaning ‘day’. We are then led to posit the following universal condition on the appearance of numerals, given that numerical bases are not necessarily equipped with [ $\pm$ singular]:

- (29) Licensing of numerals (Watanabe 2010)

Numerals are licensed only when [ $\pm$ augmented] is present.

The idea is that once we have a principle governing the distribution of numerals stated in terms of features, it becomes possible to link 1-deletion, which should arise from the failure to license a numeral, to the morphological alternation exhibited by numerical bases and measure nouns, which should receive featural characterization. Notice also that (11b) is a stronger version of (29).

The rest of the task is to explain why (29) can indeed account for 1-deletion. Recall from Section 4.2 that in the absence of [ $\pm$ singular], [ $\pm$ augmented] marks the singular–plural opposition as in (30).

- (30) a. Singular: [-augmented]  
       b. Dual/Plural: [+augmented]

Adding [+singular] to (30a) does not affect the number opposition already made. It follows, however, from the combinatorics of [ $\pm$ singular] and [ $\pm$ augmented] that [-augmented] is redundant in the presence of [+singular] (Watanabe 2010). Omission of the redundant [-augmented], then, gives:

- (31) a. Singular: [+singular]  
       b. Dual/Plural: [+augmented]

Interestingly, (29) disallows the use of the numeral for 1 under the feature system in (31). In other words, 1-deletion obligatorily arises when number features are distributed as in (31).

Given this result, we are now in a position to see why numerical base suppletion is correlated with 1-deletion. Under (31), singular corresponds to the feature not used in the category of dual/plural. Suppletion is nothing other than the reflection of this featural difference. We can characterize the English base for 10 as follows:

- (32) ‘10’ in English  
       a. *ten*: [ $\pm$ singular]  
       b. *ty*: [+augmented]

The form *ten* is compatible with [-singular] in view of expressions like *tens of thousands of books* (Kayne 2010: Ch. 3). Note also that the featural difference in (31) does not have to be reflected in morphological shape, in which case there is no suppletion even when 1-deletion is dictated.

This account carries over to the behavior of measure nouns. The shapes of the noun meaning ‘day’ are characterized as follows:

- (33) ‘Day’ in Japanese  
       a. *hi*: [+singular]  
       b. *niti*: [ $\pm$ augmented]  
       c. *ka*: [+augmented] (limited to use with a simplex numeral)

(33b) and (33c) can be combined with a numeral whereas (33a) cannot. (33b) and (33c) must, in fact, given (11b). The difference between (33b) and (33c) is already taken up in Section 4.2.

Likewise, the noun for ‘week’ receives the following account, as a first approximation:



(34) ‘Week’ in Japanese (to be revised)

- a. *syuu*: [+singular]
- b. *syuukan*: [±augmented]

A tricky question is the status of *kan*. The characterization in (34) leads us to suppose that this morpheme is the locus of [±augmented]. Furthermore, we need to make sure that the [+singular] feature carried by *syuu* will not show up in *syuukan*. An easy solution is to posit a null morpheme that hosts [+singular] and competes with *kan*. This null morpheme is used in *syuu* but does not appear in *syuukan*.

The productive usage of *kan*, however, is an expression of duration as in (35).

- (35) a. *Hanako wa mik-ka-kan ie ni tozikomotta.*  
 Hanako TOP three-day-KAN house to confined.oneself  
 ‘Hanako confined herself to her house for three days.’
- b. *Hanako wa iti-nen-kan ie ni tozikomotta.*  
 Hanako TOP one-year-KAN house to confined.oneself  
 ‘Hanako confined herself to her house for a year.’

The fact that the two usages of *kan* are written with the same Chinese character 間 pushes us towards the view that they may be related. Harbour (2011b) associates mass nouns in Kiowa with [±augmented] by pointing to a part-whole relation found in the denotation of these nouns. Likewise, I speculate that the part-whole relation inherent in the notion of duration translates into the interpretation assigned to [±augmented]. The morpheme *kan*, then, is an expression having to do with the presence or absence of the part-whole relation in the temporal domain.

A somewhat different story must be told for ‘month’, since 1-deletion is not obligatory in this case. In fact, *tuki* can also be combined with a few other numerals as in (36).

- (36) *Tatta go-peezi kaku-no ni huta-tuki kakatta.*  
 only five-page write-COMP to two-month took  
 ‘It took two months to write up just five pages.’

The contrast between *tuki* and *kagetu*, therefore, cannot be attributed to a difference in the number features discussed so far.

A very interesting property of *tuki* is that it can only be combined with lower numerals, as illustrated in (37).

- (37) *hito-tuki, huta-tuki, mi-tuki, \*?yo-tuki, \*itu-tuki, \*mu-tuki, ...*  
 one-month two-month three-month four-month five-month six-month

This means that *tuki* covers singular and paucal numbers. And within this range, it operates with the following feature system:

- (38) a. Singular:    [+singular] or [–augmented]  
       b. Dual/Plural: [+augmented]

The choice available for the feature representation of singular gives rise to the optionality of 1-deletion. The same feature system is used for *nen* ‘year’ as well as for other items such as *kiro* ‘kilo’ for which 1-deletion is optional. No suppletion is found in these cases.

The Sino-Japanese version *kagetu*, which prohibits 1-deletion, is not limited to singular and paucal. One is again tempted to treat *ka* as a separate morpheme, since it is dropped when the proximal demonstrative is added to refer to the span including the speech time, as in (39), where the final vowel /o/ is truncated. Compare it to (40).

- (39) *kon-getu*  
       this-month  
       ‘this month’

- (40) *kono hon*  
       this book  
       ‘this book’

In this respect, *getu* and *syuu* are parallel, as can be seen by putting (39) side by side with (41).

- (41) *kon-syuu*  
       this-week  
       ‘this week’

This parallelism leads us to suppose that *ka* is also the locus of [±augmented] for *getu* just as *kan* is for *syuu*, though the position vis-à-vis the nominal root differs.

- (42) Morphemes carrying [±augmented]  
       a. *-kan* (week)  
       b. *ka-* (month)

The proposed analysis is somewhat reminiscent of Bantu class markers, which encode number as well as noun class information (Katamba 2003). Unlike Bantu class markers, however, these morphemes do not change shape according to the feature value.

The morpheme *ka* is also used for *koku* ‘country’, as in *san-ka-koku* ‘three countries’. Among ordinary nouns, *koku* is an isolated exception. It should also be noted that *koku* is a bound morpheme that cannot be used alone. One might think that *kasyo* ‘place’ is similar, but *kasyo* can be used without a numeral unlike *ka-koku*, as in *kininaru kasyo* ‘(a) place that bothers me’. Recall that (11b) forces a numeral to be used when [ $\pm$ augmented] is present. One must therefore conclude that *kasyo* is an unanalyzed exceptional non-measure noun that can be directly combined with a numeral as in *san-kasyo* ‘three places’, which means that it has a defective number specification lacking [ $\pm$ singular] but can optionally be supplied with [ $\pm$ augmented].

There is one important difference between *syuu* and *getu* that needs to be mentioned. Unlike *syuu*, *getu* does not allow 1-deletion, as the ungrammaticality of (43) indicates.

- (43) \**getu*    *ni*    *san-kai*    *no*    *kaigi*  
          month per three-time GEN meeting  
          ‘three meetings per month’

The limited distribution of *getu* should be attributed to competition with the native version *tuki*. It may be the case that *getu* cannot carry [+singular], unlike *tuki*, thus being disqualified from appearing in the structure expressing a ratio, which requires an explicit marking of singularity.

## 6.4 The prediction for numeral classifiers

In contrast to measure nouns, classifiers do not allow 1-deletion. This result is predicted by (11), repeated as (44) here.

- (44) Numeral classifiers in Japanese
- a. A numeral classifier appears only when both [ $\pm$ singular] and [ $\pm$ augmented] are specified.
  - b. [ $\pm$ augmented] always selects a numeral in Japanese.

It follows from (44a) that when a classifier is used, [ $\pm$ augmented] is specified. (44b) ensures that a numeral must co-occur in such a situation. The point is briefly made in Section 4.2. It gains significance when we compare measure nouns with classifiers in relation to 1-deletion.

The prediction is borne out. Ratios can be expressed with classifiers as in (45), but *iti* (or its morphophonological variants) can never be omitted. Thus, the examples in (46) are ungrammatical.

- (45) a. *is-satu ni-sen-en no hon*  
 one-CLF two-hundred-yen GEN book  
 ‘a book that costs two hundred yen per copy’
- b. *iti-dai ni-hyaku-man-en no kuruma*  
 one-CLF two-hundred-ten.thousand-yen GEN car  
 ‘a car that costs two million yen apiece’
- (46) a. *\*satu ni-sen-en no hon*  
 CLF two-hundred-yen GEN book
- b. *\*dai ni-hyaku-man-en no kuruma*  
 CLF two-hundred-ten.thousand-yen GEN car

Adding an overt marker of the ratio such as *ni-tuki*, *atari*, or *tan’i* does not help, either.

Since there are cases where 1-deletion is not allowed by measure nouns (recall (22a) and (43), for example), this is not a knockout argument against putting measure words in the same category as classifiers. But the incompatibility of classifiers with 1-deletion is quite systematic, reinforcing the conclusion, reached independently on other grounds, that measure words are not classifiers.

## 7 Distribution of measure phrases

So far, we have looked at the behavior of measure nouns themselves. This section takes up the external distribution of measure phrases (MP), focusing on their appearance within PP and AP.

### 7.1 PP

Zwarts (1997) observes that only a limited class of locative prepositions in Dutch allows modification by MP.

- (47) Dutch locative Ps
- a. modifiable by MP: *voor* ‘in front of’, *achter* ‘behind’, *boven* ‘above’,  
*onder* ‘under’, *naast* ‘beside’, *buiten* ‘outside’
- b. not modifiable by MP: *bij* ‘near’, *in* ‘in’, *binnen* ‘inside’, *op* ‘on’, *tussen*  
 ‘between’

Essentially the same contrast is found in English.

- (48) a. *ten meters above/behind/?beside/outside the house*  
 b. *\*ten meters near/on/in/inside the house*

Remarkably, Japanese locative expressions behave in the same way, as illustrated in (49) and summarized in (50).

- (49) a. *John no ni-meetoru usiro ni Bill ga iru.*  
 John GEN two-meter behind LOC Bill NOM is  
 'Bill is found two meters behind John.'
- b. *\*Uti no hyaku-meetoru tikaku ni koozyoo ga aru.*  
 home GEN hundred-meter near LOC factory NOM is  
 '\*A factory is found one hundred meters near my place.'

- (50) Japanese locative Ps
- a. modifiable by MP: *mae* 'in front of', *usiro* 'behind', *ue* 'above', *sita* 'under', *migi* 'right', *hidari* 'left', *waki* 'beside', *yoko* 'beside', *soto* 'outside'
- b. not modifiable by MP: *soba* 'near', *tikaku* 'near', *aida* 'between', *naka* 'inside'

The classification in (50) is originally due to Okutsu (1974). Unfortunately, he did not treat the items in (50) as postpositions but as nouns. He was apparently misled by the fact that these items must be followed by a particle such as *ni*. Note, however, that the MP *ni-meetoru* in (49a) does not appear with *no*, which is obligatory for prenominal modifiers as shown in (51).

- (51) *Hanako no huta-ri \*(no) yuuzin*  
 Hanako gen two-CLF GEN friend  
 'Hanako's two friends'

The difference from nouns is most clearly seen when a classifier phrase, instead of an MP, modifies PP, as in (52), which should be compared with (51).

- (52) *Hanako no huta-ri usiro*  
 Hanako GEN two-CLF behind  
 'two people behind Hanako'

If items like *usiro* were nouns, the contrast between (51) and (52) would not be expected.

A similar stumbling block for the PP analysis is the fact that the items in (50) can be used as subjects, as in (53).

- (53) *Kuruma no usiro ga metyametyani kowareteiru.*  
 car GEN behind NOM terribly broken.is  
 ‘The rear part of the car is terribly destroyed.’

Nomura (2008) argues, however, that (53) has the same structure as (54), with an unpronounced noun acting as the real subject, based on the observation that (53) receives the same range of semantic interpretations as (54).

- (54) *Kuruma no usiro no bubun ga metyametyani kowareteiru.*  
 car GEN behind GEN part NOM terribly broken.is

The English translation of (53) only gives one possible reading. Another interpretation is that a part of something behind the car is severely damaged. The expression *usiro* alone cannot produce these semantic variations. Crucially, ambiguities of this sort do not arise in cases like (49a). Thus, examples like (53) do not provide evidence that the items in (50) are nouns.

Of course, the status of *ni* in (49a) needs to be clarified. On this score, Japanese is actually not so different from English, which allows combinations like (55a). The Japanese counterpart is given in (55b). Note that *kara* takes the place of *ni*.

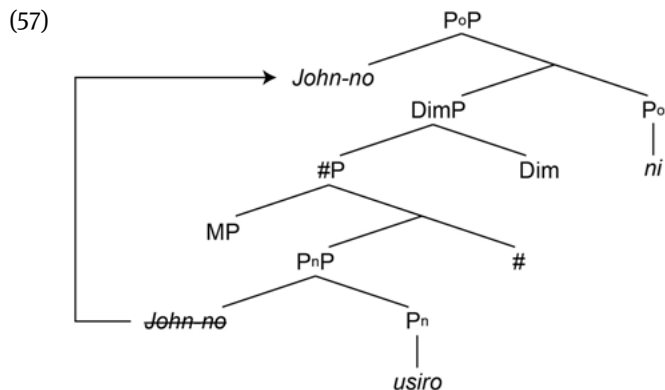
- (55) a. *from behind the hill*  
 b. *oka no usiro kara*  
 hill GEN behind from

In other words, an analysis of English that is appropriate from the Japanese perspective should posit an unpronounced particle corresponding to *ni* (Watanabe 1993).

There is an additional difference between English and Japanese. The nominal that indicates the reference point and functions as the prepositional object in English appears in front of MP in Japanese. Dutch occupies the middle ground, allowing a pronominal object to precede MP.

- (56) Dutch (Zwarts 1997)  
 a. *twee centimeter boven de deur*  
 two centimeters above the door  
 b. *er twee centimeter achter*  
 it two centimeters behind

To accommodate word order patterns like these, Watanabe (2009) proposes a fairly articulated hierarchical structure, a simplified version of which is shown in (57), corresponding to the PP in (49a).



$P_n$  and  $P_o$  are category labels tentatively given to distinguish two types of adpositional elements. An MP occupies the specifier of the projection immediately above  $P_nP$ . In Japanese, the object of  $P_n$  undergoes movement to the specifier of  $P_oP$ , crossing over MP. This movement is limited to pronouns in Dutch. The Dim head encodes the dimension of measurement, distinguishing between locative and temporal interpretations of PP. For full details, see Watanabe (2009). Svenonius (2010) proposes an equally complex, but slightly different structure for English.

For our purposes, it suffices to note that modification of PP by MP works in Japanese in the same way as in Dutch and in English. This fact should receive an account in terms of the uniform syntax and semantics of measure nouns and the other relevant structural elements. Recognition of measure nouns as nouns is the starting point of this universalist endeavor. For the semantic analysis that explains the nature of the two contrasting classes of Ps exemplified in (47) and (50), see Zwarts (1997) and Zwarts and Winter (2000).

## 7.2 AP

There is another construction where MPs display a characteristic distribution. It is well known that only positive dimensional adjectives allow MP modification (Bierwisch 1989; Lehrer 1985; Seuren 1978; Winter 2005).

- (58) a. *The man is five feet tall/\*short.*  
 b. *The boy is five years old/\*young.*

Snyder, Wexler, and Das (1995) claim that Japanese lacks the corresponding structure, but there is in fact a way of expressing the intended interpretation (Watanabe 2011, 2013a, 2013b).

- (59) a. *Kono biru wa takasa 20-meetoru dearu.*  
           this building TOP tall 20-meter is  
           ‘This building is twenty meters tall.’
- b. *Kono hako wa omosa 10-kiro dearu.*  
           this box TOP heavy 10-kilogram is  
           ‘This box weighs 10 kilograms.’

Significantly, MP modification is possible only with positive adjectives. The examples in (60) are unacceptable due to the combination with a negative adjective.

- (60) a. \**Kono biru wa hikusa 20-meetoru dearu.*  
           this building TOP short 20-meter is  
           ‘This building is twenty meters tall.’
- b. \**Kono hako wa karusa 10-kiro dearu.*  
           this box TOP light 10-kilogram is  
           ‘This box weighs 10 kilograms.’

One might wonder whether items like *takasa* are indeed adjectives, since they can be used as nouns as in (61).

- (61) a. *Kono biru wa takasa ga 20-meetoru dearu.*  
           this building TOP height NOM 20-meter is  
           ‘The height of this building is twenty meters.’
- b. *Kono hako wa omosa ga 10-kiro dearu.*  
           this box TOP weight NOM 10-kilogram is  
           ‘The weight of this box is 10 kilograms.’

The examples in (59) might then be analyzed as derived from (61) by dropping the nominative case marker. Crucially, however, the nominative case particle cannot be dropped in copular sentences of this sort, as shown in (62).

- (62) a. *Takasi wa musuko ga isya dearu.*  
           Takasi TOP son NOM doctor is  
           ‘As for Takasi, his son is a medical doctor.’
- b. \**Takasi wa musuko isya dearu.*  
           Takasi TOP son doctor is



We are therefore led to analyze (59) as involving genuine adjectives. Furthermore, adjectives and nouns also differ in argument structure. Dimensional adjectives do not take a genitive argument whereas their nominalized counterparts do, as illustrated by the following contrast:

- (63) a. \**Moshi sono biru no takasa 20-meetoru dearu naraba,*  
           if     that building GEN height 20-meter is     COND  
       b. *Moshi sono biru no takasa ga 20-meetoru dearu naraba,*  
           if     that building GEN height NOM 20-meter is     COND  
           ‘If that building is 20 meters tall, ...’

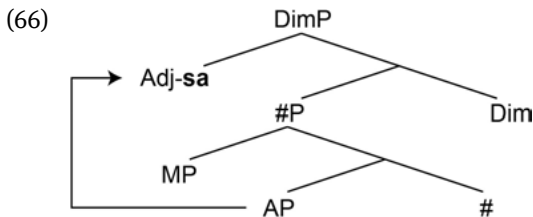
A conditional clause is used to suppress interference from topicalization and the topic marker drop. In (63a), *takasa* is forced to function as an adjective, disallowing the genitive argument. There is no such problem in (63b), on the other hand. Hence the contrast. If one erroneously assumes that the nominative case marker is dropped in (59), (63a) is incorrectly predicted to be grammatical.

Comparing (58) and (59), one notices that the order of the MP and the adjective is switched. The Japanese order is found in Romance, too.

- (64) French  
*La pièce est longue de six mètres.*  
   the room is long.F.SG of six meters  
   ‘The room is six meters long.’

- (65) Italian  
*Gianni è alto due metri.*  
   Gianni is tall.M.SG two meters  
   ‘Gianni is two meters tall.’

Corver (2009) accounts for the Romance order in terms of the movement of AP (for French) or of the adjective itself (for Italian) over MP. The phrasal movement analysis can account for the Japanese pattern, too. Somewhat modifying Corver’s analysis, Watanabe (2011, 2013a, 2013b) proposes the following structural analysis of examples like those in (59):



Since dimension is an indispensable notion in measurement, it heads a projection both in adjectival and in adpositional structures. (57) and (66) are therefore based on shared structural resources. The adjective takes the suffix *-sa* when it is raised to the specifier of DimP as a phrase.

It should be mentioned at this point that the homophony of dimensional adjectives and their nominalized forms is no news. Corver (2009: note 16) observes that the masculine singular form of dimensional adjectives can serve as a noun in Romance, as shown in (67).

(67) French

*La pièce a six mètres de long.*  
 the room has six meters of length  
 'The room has a length of six meters.'

As Corver points out, there is no gender agreement with the feminine subject in (67), unlike in the adjectival structure of (64).

A remarkable property shown by MP modification of adjectives in Japanese is that there is an additional structural possibility slightly different from that in (59). Consider the following examples:

- (68) a. *Kono biru wa takasa 20-meetoru aru.*  
           this building TOP tall 20-meter is  
           'This building is twenty meters tall.'
- b. *Kono hako wa omosa 10-kiro aru.*  
           this box TOP heavy 10-kilogram is  
           'This box weighs 10 kilograms.'

Note that the form of the copula is different. Furthermore, the interpretation is also altered. This semantic difference might be difficult to observe when the sentences in (68) are considered in isolation, but it emerges clearly when there is a continuation. Suppose that (68a) is followed by:

- (69) *Totemo hikui.*  
       very short  
       'It's very short.'

This continuation sounds contradictory. When (59a) is followed by (69), on the other hand, it is perfectly natural. The contrast between the version with *aru* and the one with *dearu* can be explained if (68a) means not just that this building is twenty meters tall, but in addition that it is tall. (68a) is incompatible with (69) because it is impossible for something to be tall and very short at the same time.

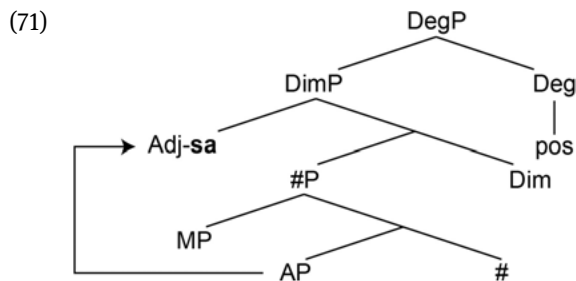
In English, when someone says, “This building is twenty meters tall,” the speaker is not committed as to whether the building is tall or not. In other words, the presence of an MP forces the adjective to be interpreted neutrally as a scale that starts at point 0 and goes upward without limit. The MP specifies the value that holds of the subject on that scale. The same is true with (59a). If someone says, “This building is tall,” on the other hand, the height of the building is claimed to significantly exceed the standard value specified in the context of utterance on the scale determined by the adjective (Kennedy 2007). (68a) combines these two modes of semantic interpretation concerning adjectives.

The question is why this combined interpretation is possible in Japanese but not in English. Bierwisch (1989: 82) observes that the following example, though deviant, has a clear interpretation according to which Hans is 1.20m tall and is short:

- (70) German  
 ?Hans ist 1.20m klein.  
 Hans is 1.20m short

The deviance is due to the use of a negative adjective. See also Lehrer’s (1985) comments on a similar English example. The Japanese phenomenon should be distinguished from cases like these.

The structural details of the sentences in (59) and (68) need to be specified in light of Japanese-internal considerations, too, especially in relation to the fact that the form of the copula (*dearu* in (59) and *aru* in (68)) gives rise to two different kinds of reading. Capitalizing on the fairly standard idea (Cresswell 1976) that an unpronounced degree modifier *pos* is responsible for the non-neutral interpretation of the adjective in cases like *this building is tall*, Watanabe (2013a, 2013b) proposes that the location of *pos* is higher than DimP in (66). More concretely, the proposal is that *pos* is located at DegP as in (71).



The structure in (71) is obligatorily selected when *aru* is used, whereas that is not the case when *dearu* is used. This analysis is linked to the fact that *dearu* is compatible with all sorts of predication relations unlike *aru*, as illustrated in (72).

- (72) a. *Hanako wa gakusei dearu.*  
 Hanako TOP student is  
 'Hanako is a student.'
- b. *Hanako wa (totemo) kenkoo dearu.*  
 Hanako TOP very healthy is  
 'Hanako is (very) healthy.'
- c. *Sono tegami wa Hanako kara dearu.*  
 that letter TOP Hanako from is  
 'That letter is from Hanako.'

That is to say, *dearu* cannot be assumed to obligatorily select DegP. On the other hand, *aru* is impossible for these cases.

- (73) a. \**Hanako wa gakusei aru.*  
 Hanako TOP student is  
 'Hanako is a student.'
- b. \**Hanako wa (totemo) kenkoo aru.*  
 Hanako TOP very healthy is  
 'Hanako is (very) healthy.'
- c. \**Sono tegami wa Hanako kara aru.*  
 that letter TOP Hanako from is  
 'That letter is from Hanako.'

Once we have this analysis of (68), the question becomes why English disallows this structural option. For a concrete formal semantics analysis, the reader is referred to Watanabe (2013b), where it is proposed that the Dim head in English that selects an MP-hosting #P blocks the semantic composition of a further degree modifier, unlike its Japanese counterpart.

## 8 Conclusion

To conclude, this chapter has tried to situate the Japanese pattern in a crosslinguistic context by examining both internal and external properties of measure phrases. The status of measure words in individual languages can only be determined on that basis. Their behavior in Japanese falls within the range expected from the study of other languages, except for the fact that MP modification of dimensional adjectives yields a peculiar interpretive possibility. It is hoped that future comparative study will shed light on the typological distribution of this interpretive possibility.

There are two noteworthy properties of Japanese measure nouns. First, temporal unit words exhibit an unusually complex morphological behavior, which arises from rampant number-sensitive suppletion and from the use of special morphemes that carry [ $\pm$ augmented]. The suppletive paradigms mix items that belong to different vocabulary classes, Yamato and Sino-Japanese. The special status of temporal units itself is not unique to Japanese. In Modern Hebrew, for example, units of time are the only noun class that allows affixation of the dual marker with the plain dual interpretation, according to Ritter (1995). Morphologically, however, there is nothing special about Hebrew temporal unit nouns.

Second, 1-deletion outside the domain of numerical bases is found with measure nouns. I do not know of any systematic discussion of such cases in other languages, whether or not the phenomenon is limited to measure nouns as in Japanese. The study on 1-deletion is quite illuminating as to the distribution of number features, once an appropriate theory of numeral licensing is formulated. The analysis of the Japanese phenomenon presented in this chapter is expected to stimulate future research on comparable cases in other languages.

## Acknowledgments

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Shingo Imai

# 17 Japanese spatial deixis in crosslinguistic perspective

## 1 Introduction

Traditionally, three categories of deixes are recognized based on spatio-socio-temporal axes: spatial deixis based on spatial axes (e.g. *this*, *that*, *here*, and *there*), personal deixis based on social axes (e.g. *I* and *you*), and temporal deixis based on temporal axes (e.g. *now*, *today*, and *yesterday*). Levinson (1983), following Lyons (1968, 1977) and Fillmore (1971, 1975), adds social deixis (e.g. honorifics) and discourse (or text) deixis. The center of spatio-socio-temporal axes is called “deictic center”, “origo” (Bühler 1982[1934]: 13), or “zero-point” (Fillmore 1982: 45).

The core function of spatial deixis is to point to a referent or location from the deictic center. Himmelmann (1996: 240) defines this type as “situational” use. Fillmore (1975: 259) divides “situational” use into “gestural” usage and “symbolic” usage. Gestural usage is often accompanied with pointing gestures. An example of gestural usage is (1). Without the speaker’s pointing gesture, the addressee/hearer will not know which one is Mary’s and which one is Anna’s.

- (1) ***This*** is Mary’s, and ***that*** is Anna’s.

In symbolic usage, deictic center itself consists of a referent. In (2), an example of symbolic usage, the speaker’s location or origo is inside the city. Therefore, no pointing gesture is necessary for the addressee to decode the location of the referent.

- (2) ***This*** city is beautiful.

The focus of this chapter is on spatial deixis coded in demonstratives. Other functions of demonstratives include discourse deixis, anaphora/cataphora, and recognitional usage. These are not targets of this chapter and are given only a brief sketch here. (3) and (4) are examples of discourse deixis, which Levinson (1983: 62) characterizes as having to do with “the encoding of reference to portions of the unfolding discourse in which the utterance (which includes the text referring expression) is located.”

- (3) ***This*** (in creaky voice) is what phoneticians call creaky voice.  
(Levinson 1983: 62)

- (4) “You are wrong”. ***That’s*** exactly what she said. (Levinson 2004: 108)

Recognitional usage mentioned in Himmelmann (1996) is another function of demonstratives. “Recognitional use involves reference to entities assumed by the speaker to be established in the universe of discourse and serves to signal the addressee that the speaker is referring to specific, but presumably shared knowledge” (Himmelmann 1996: 240). (5) is an example of the Japanese demonstrative *ano* ‘that’ in recognitional use.

- (5) A: *Kinoo Yamada-san ni aimasi-ta.*  
 yesterday Yamada-Mr. DAT meet-PST  
*Ano hito itumo genki desu ne.*  
 that person always healthy COP SFP  
 ‘Yesterday, I met Mr. Yamada. That man is always in high spirits.’
- B: *Hontooni soo desu ne.*  
 truly so COP SFP  
 ‘Indeed so.’  
 Kuno (1973a: 283)

The speaker A assumes that the addressee B also knows *Yamada* and refers to him with recognitional *ano* as in *ano hito* ‘that man’. If the speaker A does not assume that the addressee B knows *Yamada*, then an anaphoric *sono* instead of *ano* is used to refer to *Yamada* as in *sono hito* ‘that man’.

The organization of this chapter is as follows. In Section 2, we review previous research on Japanese demonstratives focused on spatial deictic functions. In Section 3, we discuss parameters that characterize and determine the choice of demonstratives in use. Two or more parameters may be involved in choosing an appropriate demonstrative. Parameters are not equally powerful for choosing demonstratives. In Section 4, we show how some parameters win out over other parameters when parameters conflict. Section 5 concludes this chapter.

## 2 Previous research on Japanese demonstratives

### 2.1 Paradigm of Japanese demonstratives

Japanese demonstratives make a rich paradigm of a three-term system as shown in Table 1.

In the literature on Japanese demonstratives, deictic uses of demonstratives are termed *genba shiji* ‘on-the-spot reference’ or *ganzen shiji* ‘in-front-of one’s-eyes reference’, while non-deictic use is termed *bunmyaku shiji* ‘contextual reference’. Although discourse deixis in the sense of Levinson (1983) is seldom discussed

**Table 1:** Paradigm of Japanese demonstratives

pronoun	<i>kore</i> this one	<i>sore</i> that one	<i>are</i> that one over there
adnominal	<i>kono</i> this	<i>sono</i> that	<i>ano</i> that...over there
locational pronoun	<i>koko</i> here	<i>soko</i> there	<i>asoko</i> over there
manner adverb	<i>koo</i> in this way	<i>soo</i> in that way	<i>aa</i> in that way
illustrative adnominal	<i>konna</i> like this	<i>sonna</i> like that	<i>anna</i> like that
derogative personal pronoun	<i>koitu</i> this guy	<i>soitu</i> that guy	<i>aitu</i> that guy
formal directional/personal pronoun	<i>kotira</i> this way/person	<i>sotira</i> that way/person	<i>atira</i> that way/person
non-formal directional pronoun	<i>kotti</i> this way	<i>sotti</i> that way	<i>atti</i> that way

in the literature, it should be included under the rubric of *genba shiji* usage for the Japanese demonstratives as well.

We will mainly review deictic usage in Section 2.2 and briefly review non-deictic usage in Section 2.3.

## 2.2 Deictic demonstratives

According Takahashi and Suzuki (1982), Ōtsuki (1897: 60) and other grammarians in as early as the late 1800s described Japanese demonstratives as having a three-way system in terms of distance, and according to Furuta (1980), Aston (1904 [1872]) was the first to observe that *so-* denotes closeness to the addressee. In the 20th century, *Kokugogaku* grammaticians such as Matsushita (1901, 1928), Yamada (1908), Yasuda (1928), and Sakuma (1936), noted that *so-* refers to things/location close to the addressee. Sakuma (1936: 35) proposed that the demonstratives should be described according to the “territory” of either the speaker or the addressee and not solely by distance from the speaker. Sakuma called the area where the speaker can reach, the speaker’s territory or the speaker’s sphere of influence and the area where the addressee can reach, the addressee’s territory or the addressee’s sphere of influence. We adopt the notion of territory (sphere of influence) by Sakuma and use the term to refer to the psychological closeness to the speaker/addressee. Thus, Sakuma disposed of the notion of three-way distance from the speaker in the explanation of

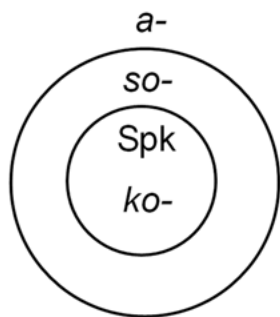


Figure 1: Ōtsuki's (1897: 60) Model

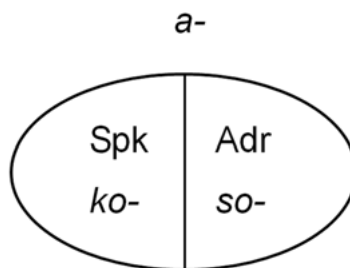


Figure 2: Sakuma's (1936: 35) Model

Japanese demonstratives. This view can be traced back to Aston (1904 [1872]), who considered demonstratives to be connected to personal pronouns and claimed parallelism of *ko-*, *so-* and *a-* forms to the first, second, and third personal pronouns, respectively. Sakuma claimed that *ko-* refers to the speaker's territory, *so-* to the addressee's territory, and *a-* to a location outside of both territories. Figure 1 shows the traditional three-way distinction measured by the distance from the speaker (Ōtsuki (1897) and others). Figure 2 represents Sakuma's (1936) proposal, in which *ko-* in the speaker's territory is in opposition to *so-* in the territory of the addressee and *a-* is located outside the two territories.

Sakuma's claim was criticized by Sakata (1971) and Horiguchi (1978), who pointed out that *so-* is sometimes used to refer to a referent/location, which does not belong to the addressee's territory. In (6), for instance, both a taxi driver and a passenger can use *soko* to refer to a place they are approaching, which belongs to neither the speaker's nor the addressee's territory.

- (6) Passenger: *Soko de tomete kudasai.*  
                   there LOC stop please  
                   'Please stop there.'

Driver: *Hai soko desu ne. Syooti-simasi-ta*  
           Yes there COP SFP understand-do-PST  
           'Yes, there?. All right.'

Sakuma's proposal fails to explain this example because the territory of the addressee is not relevant to the use of *sore* in (6). In light of such examples, Sakata (1971) claimed that the notion of the territory of the addressee should be dropped, on the ground that distance from the speaker, not the territory of the addressee, decides the choice of demonstratives. Her claim is regarded as essentially the same as the three-way distance view of demonstratives. She notes that a referent/location which

is not close to the speaker is referred to by *so-*, and a referent/location which is not close to the speaker is often close to or coincides with the location of the addressee in the situation of conversations. A similar claim was made by Yoshimoto (1986: 57), who proposed Figure 3.

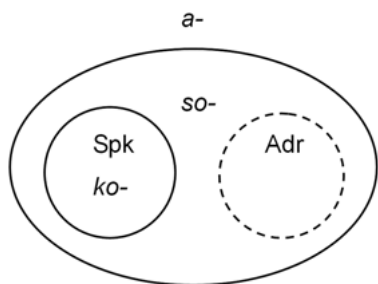


Figure 3: Yoshimoto's (1986: 57) Model

In Yoshimoto's analysis, the three-way distinction of distance is determined in terms of the location of the speaker. The addressee's territory is subsumed in the oval space denoted by *so-*. Kamio (1997: ch.5) adopts Yoshimoto's model and applies the notion of "territory of information" to explain a deictic tripartite distinction.<sup>1</sup> *Ko-* is considered to be within the speaker's territory, *so-* is outside of the speaker's territory but within the conversational space, and *a-* is outside of the conversational space. Conversational space, as proposed by Yoshimoto, denotes the domain around the interlocutors (speaker and addressee). Thus, Kamio's demarcation is identical with Yoshimoto's.

The proposals of Sakata (1971), Horiguchi (1978), Yoshimoto (1986), and Kamio (1997) all share a problem. If the speaker shouts at an addressee who is very far from the speaker, say 50 meters away, to ask the addressee to pass a ball rolling close to the addressee toward the speaker, the speaker will use *so-*.

- (7) *Sono booru kotti ni nagete kudasai.*  
 that ball this.way to throw please  
 "Throw that ball this way, please."

Since the ball is very far from the speaker, we should be able to use *a-* in this situation if the claim of Sakata (1971) and others holds. However, the fact is that we cannot use *a-*. This example indicates that the territory of the addressee is a decisive factor in the choice of demonstratives in such a case.

<sup>1</sup> Kamio (1990, 1997) adopted Sakuma's notion of territory of the speaker/addressee and expanded it to the notion of territory of information. He claims that not only the system of demonstratives but also a variety of pragmatic phenomena including evidentiality and politeness can be explained by referring to territory of information.

A third approach is to admit both claims discussed above, namely three-way distance from the speaker and the territory of the addressee. Mikami (1955, 1970) observes that both the fusion type and the opposition type of territories are available. In the opposition type, the location of the speaker is different from that of the addressee. The fusion type, on the other hand, obtains when the location of the speaker and the location of the addressee coincide. In the fusion type, demonstratives are used based on the distance from the speaker's location, which is same as that of the addressee.



Figure 4: Mikami's (1955) model

In Mikami's model, *so-* does not appear in the fusion type, and *a-* does not appear in the opposition type. Shōho (1981) modified Mikami's model and allowed all three demonstratives to appear in both types. In Figure 5, dotted lines indicate "loose" demonstratives, which are only defined negatively as showing up only when other demonstratives are not applicable.

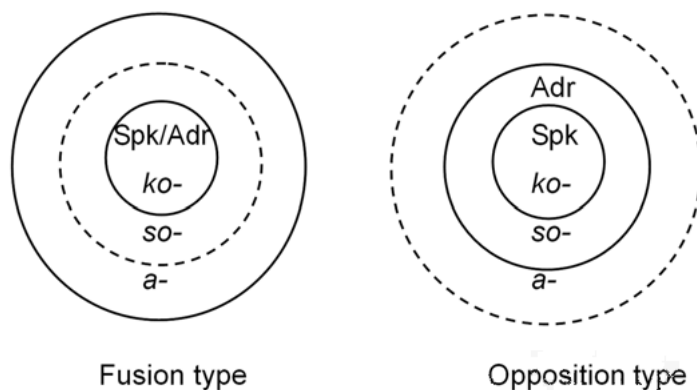


Figure 5: Shōho's (1981) model

In Shōho's (1981) model, *ko-* is used for the speaker's territory and *a-* for neither the speaker's nor the addressee's territory. *So-* has a two-fold meaning, medial distance from the speaker in the fusion type, and the addressee's territory in the opposition type.

Takahashi and Suzuki (1982) proposed another classification as shown in Figure 6.

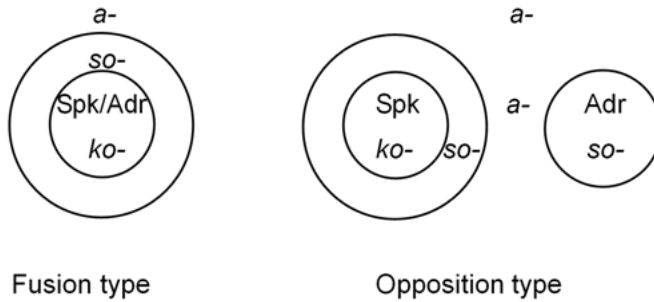


Figure 6: Takahashi and Suzuki's model (1982: 27, 29)

In this model, *so-* appears twice, one for the medial distance from the speaker and the other for the addressee's territory. *A-* may appear outside of both the speaker's and the addressee's territory, or it may intervene between the location designated by medial *so-* and the addressee's territory.

We will show in Section 3.3 that Takahashi and Suzuki's model captures the facts of Japanese spatial deixis most adequately.

## 2.3 Non-deictic demonstratives

A great deal of studies on Japanese demonstratives have focused on *bunmyaku shiji* 'contextual reference', especially the distinction of anaphoric *sore* 'that' and recognitional use of *are* 'that' as we saw in (5). *Bunmyaku shiji* corresponds to non-deictic uses and should not be confused with "discourse deixis" in Levinson's (1983: 62) sense. Although this chapter does not go into non-deictic uses of *bunmyaku shiji* in detail, let us briefly mention here the main stream of studies on anaphoric and recognitional use. Kuno (1973a, 1973b) states that *a-* refers to a referent known by both the speaker and the addressee as shown in (5) repeated below, while *so-* is used to refer to a referent which is not known either to the speaker or to the addressee.

- (5) A: *Kinoo Yamada-san ni aimasi-ta.*  
 yesterday Yamada-Mr. DAT meet-PST  
*Ano hito itumo genki desu ne.*  
 that person always healthy COP SFP  
 'Yesterday, I met Mr. Yamada. That man is always in high spirits.'

- B: *Hontooni soo desu ne.*  
 truly so COP SFP  
 'Indeed so.'

Kuno (1973a: 283)

The explanation of the usage of *a-* is basically identical with the recognitional usage by Himmelmann (1996). Other scholars such as Horiguchi (1978) and Kuroda (1979) point out that examples like (8) run against Kuno's generalization, and claim that the speaker's direct knowledge/experience allows the speaker to use *a-* even if the knowledge/experience is not shared by the addressee.

- (8) *Kyoo Kanda de kazi ga atta yo.*  
 today Kanda LOC fire NOM was SFP  
*Ano kazi no kotodakara hito ga nanninmo sin-da*  
 that fire GEN because people NOM many die-PST  
*to omou yo.*  
 QUOT think SFP  
 'There was a fire in Kanda today. Because of (my knowledge about) that fire,  
 I think that many people died.'  
(Kuroda 1979: 101)

Kinsui and Takubo (1990) are also aware of the use of *a-* without shared knowledge/experience. They claim that such a use of *a-* is licensed by pragmatic conditions and propose a discourse management system that deals with both deictic and non-deictic demonstratives uniformly, based on Fauconnier's (1994) Mental Space Theory. Hōji et al. (2003) further pursue the uniform approach of both deictic use and non-deictic use of demonstratives by introducing the notion of D-indexed NPs. D-indexed NPs are known to the speaker by direct experience. *A-* is used in both (5) and (8) above because the speaker is talking about a referent known to him/her through his/her direct experience.

### 3 Parameters

#### 3.1 Elicitation of parameters

In Section 3, we will examine semantic features called "parameters" (indicated in small capitals) of spatial deixis, namely demonstrative pronouns, demonstrative adnominals, and demonstrative adverbs from a typological point of view. Comparison of uses of spatial deixis of Japanese and other languages will shed a clear light on the characteristics of Japanese spatial deixis.

Fillmore (1982), Anderson and Keenan (1985), Diessel (1999), and Imai (2009) conducted typological studies of demonstratives. Imai (2009) made a cross-linguistic comparison of the semantics of spatial deixis by using elicitation sets such as Fig. 7. In Imai's (2009) data collection from native speakers of fifteen languages including Japanese, polystyrene cups were placed on a table 75 centimeters wide and 160



centimeters long.<sup>2</sup> A variety of settings were used. In one setting, shown in Fig. 7, a speaker (informant) sat at one side of the table, and the addressee (elicitor) diagonally behind the speaker.

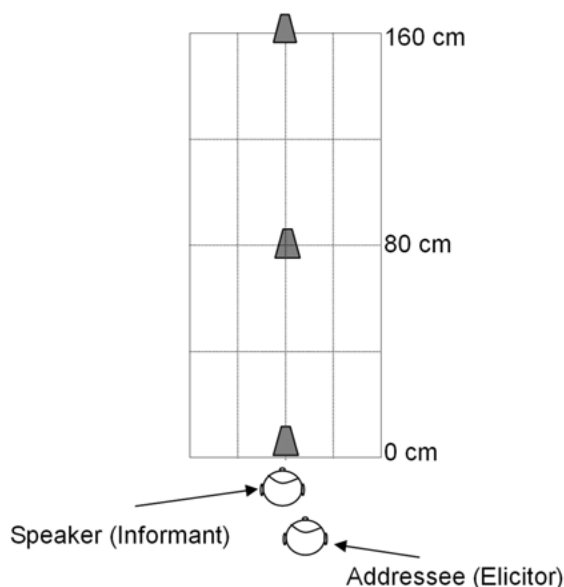


Figure 7: Basic setting (Imai 2009: 22)

The elicitor manipulated the number of cups, size of cups, location of cups, location of addressee (elicitor), and so forth to investigate parameters for choosing demonstratives in each language.

Parameters, or semantic features of demonstratives, may be morphologically evident in the forms of demonstratives. Examples of such overt parameters are PROXIMAL and DISTAL encoded in English *this/here* and *that/there*, respectively. Parameters that are not morphologically coded in demonstratives are “covert” parameters. For example, a relatively distal object, which is otherwise referred to with distal *are* ‘that over there’ in Japanese, can be referred to with proximal *kore* ‘this’ once it is touched with a long tool like a stick. As we will discuss later, the switching from distal to proximal form in such a case is triggered by the force of the parameter CONTACT of the speaker. In other words, the “covert” parameter of CONTACT, which is not morphologically marked on demonstrative forms, determines the choice of demonstrative in this case.

<sup>2</sup> Language samples collected by elicitation are: English (Indo-European), Spanish (Indo-European), Japanese (Isolated), Korean (Isolated), Santali (Austro-Asiatic), Mundari (Austro-Asiatic), Ao (Tibeto-Burman), Apatani (Tibeto-Burman), Mizo (Tibeto-Burman), Newari (Tibeto-Burman), Malagasy (Malayo-Polynesian), Thai (Tai-Kadai), Luyia (Bantu), Venda (Bantu), Nuer (Nilo-Saharan). Samples from other languages are added in some situations such as a doctor-and-patient situation in 4.6.

### 3.2 Anchor

“Anchor” is the base to which a referent/location is related in spatial deixis. “Speaker” is the indispensable person in utterance. It serves as a primary anchor in all languages. In English, *this* designates proximity of a referent to the speaker; *that* designates distality of a referent to the speaker. *This* and *that* are both “speaker-anchored” because the choice between the two is determined in relation to the position of the speaker.

“Addressee” is the person whom the speaker is talking to. Mere overhearers at the site are excluded from the term “addressee” (Fillmore 1982). For instance, Japanese, Korean, and Mparntwe Arrernte (Pama-Nyungan) (Wilkins 1989) have a three-way system in demonstratives. In Mparntwe Arrernte, the three-way distinction is based on the distance from the speaker, namely proximal, medial, and distal distance from the speaker, while in Korean, the form in the second category indicates “close to the addressee”. (We will discuss the difference between Korean and Japanese in Sections 3.3 and 3.4.) Anderson and Keenan (1985: 282) called the Mparntwe Arrernte type a “distance-oriented system” and the Korean type a “person-oriented system”. While the term “person-oriented system” might imply that it is insensitive to distance from the speaker, Korean-type demonstratives are actually sensitive to distance from the speaker. Both distance-oriented and person-oriented systems use the speaker as the “deictic center” and as the primary anchor as well. Deictic center is the location at which the speaker exists and serves as a reference point of spatial deixes. All languages use the deictic center as the primary anchor, in addition, some languages use the location of the addressee as a secondary anchor. Yet other languages use the location of another person such as a participant of a conversation as an additional anchor. A demonstrative indicating so-called “close to the addressee” is addressee-anchored; nevertheless, it is also sensitive to the location of the speaker, namely, the deictic center. A demonstrative meaning “close to the addressee” connotes that the referent is not close to the deictic center.

In the language samples of Imai (2009), collected from reference grammars, there are 162 languages whose demonstrative pronouns/adnominals have three-term systems. Among them, 99 languages refer to distance from the speaker only, and 63 languages, including Japanese and Korean, include reference to the addressee. Less than half of the languages with a three-way system have the addressee as a secondary anchor. We predict, however, that there are many cases that languages described as a three-way system based on distance from the speaker may actually have a three-way system including the reference to the addressee. For instance, Anderson and Keenan (1985: 282) categorize Spanish as a language without an addressee anchor (or distance-oriented in their term); however, Spanish actually has a system with the addressee anchor, as we will see in Section 3.3. Addressee anchor in a three-way demonstrative system is apt to be overlooked in the descriptions of reference grammars.

The assumption that the speaker anchor is considered primary and the addressee anchor secondary is supported by the asymmetries observed between the speaker anchor and the addressee anchor. First, all the languages use the speaker as an anchor, but not necessarily the addressee. The speaker is an indispensable participant in any utterances including monologues. In a canonical utterance situation, there exist both the speaker and the addressee. The addressee is a salient participant next to the speaker and is used as an anchor after the speaker.

Second, in many languages, two or three degrees of distance from the location of the speaker are the norm in speaker-anchored systems, while the addressee anchor does not have a distance contrast. In other words, a referent is marked only for proximity to the addressee, but not for medial or distal distance from the addressee. The asymmetry of complexity of distance demarcation between speaker-anchored forms and addressee-anchored forms reflects the primary and secondary differences between the two.

The third reason comes from language acquisition studies. Sakuma (1936), Ōkubo (1967), and Itō and Ōshima-Takane (2004) report that Japanese children acquire demonstratives in the order of proximal forms, distal forms, and addressee-anchored forms. For children, speaker-anchored forms are easier to recognize and are acquired earlier than addressee-anchored forms. Such cognitive asymmetry in first language acquisition supports the view that the speaker-anchor is the primary and the addressee anchor is the secondary.

### 3.3 Dual anchor system

In this section and the next section, we discuss two types of addressee anchor systems. We will show how the “dual anchor system”, one of two subtypes of addressee anchor systems, works. The dual anchor system is named so because it incorporates both the speaker anchor and the addressee anchor in its system. The usages of demonstratives in terms of the location of the speaker and the addressee of this system are exemplified by the elicited data shown below from Japanese and Spanish.

In Table 2, “Spk/Adr” indicates that the speaker and the address are at the same location, namely at one end of a table, and the speaker is holding a referent in his/her hand. “0 cm” indicates that a referent is at the edge of the table, and “40 cm” means a referent at 40 centimeters away from the edge of the table, and so on. Table 2 shows that root forms *ko-*, *so-*, and *a-* (representing both demonstrative pronouns and adnominals) denote the PROXIMAL, MEDIAL, and DISTAL parameters, respectively, when the speaker and the addressee are at the same end of a table.<sup>3</sup> As proposed for Figure 6 in Section 2, the fusion type contrasts with the opposition type of territories.

<sup>3</sup> Table 2 is the summation of the data given by several informants. The same applies to other tables of other languages.

The fusion type describes the situation in which the location of the speaker and the location of the addressee coincide as in Table 2. In this case, *so-* is used to show a MEDIAL distance from the speaker (and the addressee).

**Table 2:** Three degrees of distance: Japanese demonstrative roots

Spk/Adr	0cm	40cm	80cm	120cm	160cm
<i>ko-</i>	<i>ko-</i>	<i>ko-/so-/a-</i>	<i>ko-/so-/a-</i>	<i>so-/a-</i>	<i>so-/a-</i>

Table 3 shows the uses of demonstrative roots when the addressee is at the other end of a table. The second category *so-* denotes a referent in the addressee's proximity, that is, in her hand or proximal to the addressee.

**Table 3:** Addressee at the other end of a table: Japanese demonstrative roots

Spk	0cm	40cm	80cm	120cm	160cm	Adr
<i>ko-</i>	<i>ko-</i>	<i>ko-/so-</i>	<i>so-/a-</i>	<i>so-/a-</i>	<i>so-/a-</i>	<i>so-</i>

In Table 4, the speaker and the addressee stand four meters apart, and cups were lined up behind the speaker (indicated by -1m, -2m and -3m), between the speaker and the addressee (indicated by 1m, 2m and 3m), and on the side of the addressee away from the speaker (indicated by 5m, 6m, 7m, and 8m).

**Table 4:** Speaker and addressee stand four meters apart: Japanese demonstrative roots

-3m	-2m	-1m	Spk	1m	2m	3m	4m/Adr's	5m	6m	7m	8m
<i>a-</i>	<i>a-</i>	<i>ko/so-</i>	<i>ko-</i>	<i>ko/so-</i>	<i>so-</i>	<i>so/a-</i>	<i>so-</i>	<i>so/a-</i>	<i>so/a-</i>	<i>so/a-</i>	<i>a-</i>

Table 4 shows that both *a-* and *so-* can be used for a referent three meters away from the speaker, while only *so-* but not *a-* is used for a referent at the addressee's feet, four meters away from the speaker. The use of *so-* for a referent at the addressee's feet indicates that it denotes the ADDRESSEE parameter referring to referents in the territory of the addressee. The appearance of *so-* at one meter, two meters, or minus one meter away from the speaker, which is not far from the location of the speaker, indicates this usage of *so-* means medial distance from the speaker. Therefore, the second category, *so-*, has a two-fold meaning: speaker-anchored MEDIAL parameter on one hand, and the ADDRESSEE parameter on the other. If the speaker is shouting at the addressee who is very far from the speaker, he/she will use one of *so-* forms as shown in (7), which is repeated below.

- (7) *Sono booru kotti ni nagete kudasai.*  
 that ball this.way to throw please  
 “Throw that ball this way, please.”

The use of the *so-* form in such a situation reinforces the ADDRESSEE parameter of *so-* forms.

In Mikami (1955, 1970), it was claimed that *so-* should appear only as the ADDRESSEE parameter in the opposition type, while in Shōho (1981), it was argued that *so-* should appear in either – as the ADDRESSEE parameter in the opposition type or as MEDIAL distance parameter from the speaker in the fusion type. Contrary to expectations based on their claims, the uses of *so-* at one meter, two meter, and minus one meter away from the speaker indicate that *so-* as MEDIAL parameter appears in the opposition type. These observations agree with the experimental data of Takahashi and Suzuki (1982) and support their claim.

We call the Japanese type deictic system a “dual anchor system” because the demonstratives in the second category denote either medial distance from the speaker or proximity to the addressee. Medial distance from the speaker obtains when distance is calculated from the location of the speaker. In this case, the speaker functions as the anchor. Proximity to the addressee refers to the case where distance is calculated from the addressee. In this case, the addressee is the anchor. An anchor is the base from which the location or distance of a referent is calculated. Japanese *so-* makes use of the speaker as the only anchor in the fusion type, while the addressee is the secondary anchor in the opposition type.

The usage of Spanish demonstratives showed the same pattern as Japanese. In the same setting as in Japanese elicitation, cups on a table were referred to with three kinds of demonstratives based on the distance from the speaker: proximal *esta*, medial *esa*, and distal *aquella* (but see Section 3.6 for a situation where distal forms are not used). This three-term contrast also appeared for locational adverbs, proximal *aquí*, medial *ahí*, and distal *allí*. The second category forms *esa* and *ahí* were used to refer to medial distance in the fusion type, when the location of the speaker and that of the addressee coincide.

In the opposition type, where the addressee/elicitor sat at the opposite end of a table from the speaker, the speaker used a proximal form *esta* for a referent close to her, and switched to the second form *esa* for a referent a little farther from the speaker. For a referent farther from the speaker and closer to the addressee, the speaker used *esa* and a distal form *aquella* interchangeably, but for a reference in the addressee’s hand, the speaker used *esa* but not *aquella*.

**Table 5:** Speaker and addressee stand four meters apart: Spanish feminine singular demonstratives

-4m	-3m	-2m	-1m	Spk	1m	2m	3m	4m/Adr	5m	6m
<i>aquella</i>	<i>esa</i>	<i>esa</i>	<i>esta</i>	<i>esta</i>	<i>esta/esa</i>	<i>esa</i>	<i>esa/aquella</i>	<i>esa</i>	<i>aquella</i>	<i>aquella</i>

Table 5 follows the same pattern as Table 4 for Japanese, when the speaker and the addressee stood four meters apart. The speaker could use *aquella* as well as *esa* for a referent three meters away from the speaker but used only *esa* for the referent at the addressee's feet four meters away from the speaker and the use of *aquella* was denied. This indicates that the second category *esa* in Spanish, has two meanings in the same way as Japanese: encoding the speaker-anchored MEDIAL parameter on the one hand, and the ADDRESSEE parameter on the other.

As noted in example (7) above, Japanese speakers use a second category form to request an addressee who is very far from the speaker to throw back a ball. The same applies to Spanish speakers. *Esa*, a second category form, but not *aquella*, can be used in such a situation. Note that, in Spanish, if there exists only one ball, a definite article *la* can be used; however, if identification of the ball is required, such as in comparison with another ball, then *esa* is preferred.

Spanish was categorized in the so-called “distance-oriented” system in Anderson and Keenan (1985: 282). However, as observed above, Spanish does encode proximity to the addressee in the same way as Japanese. In addition to Japanese and Spanish discussed above, Venda, Thai, Santali, and Nuer among the fifteen languages examined by Imai (2009) also show behaviors indicating that they should be categorized into the dual anchor system.

### 3.4 Addressee anchor-isolated system

In this section, we will discuss the other addressee-anchored system, namely the “addressee anchor-isolated system”. The following tables show the forms used by Korean informants to refer to referents placed on a table.

**Table 6:** Two degrees of distance: Korean demonstrative roots

	Spk/Adr	0cm	40cm	80cm	120cm	160cm
Root	<i>i-</i>	<i>i-</i>	<i>i-</i>	<i>ce-</i>	<i>ce-</i>	<i>ce-</i>

**Table 7:** Addressee at the other end of a table: Korean demonstrative roots

	Spk	0cm	40cm	80cm	120cm	160cm	Adr
Root	<i>i-</i>	<i>i-</i>	<i>i-</i>	<i>i-/ce-</i>	<i>ce-/ku-</i>	<i>ce-/ku-</i>	<i>ku-</i>

**Table 8:** Speaker and addressee stand four meters apart: Korean demonstrative roots

-3m	-2m	-1m	Spk	1m	2m	3m	4m/Adr	5m	6m	7m	8m
<i>ce-</i>	<i>i-/ce-</i>	<i>i-/ce-</i>	<i>i-</i>	<i>i-</i>	<i>i-/ce-</i>	<i>ce-/ku-</i>	<i>ku-</i>	<i>ce-/ku-</i>	<i>ce-</i>	<i>ce-</i>	<i>ce-</i>

A striking contrast is observed between the forms in Table 6 on the one hand, and Tables 7 and 8 on the other. Table 6 is a case of the fusion type, where the location of the speaker and that of the addressee coincide. The table shows that *ku*- is not used in the fusion type. *Ku*- appeared in the opposition type where the addressee's location is separated from the location of the speaker, exemplified in Tables 7 and 8. It is clear that the second category *ku*- encodes only the ADDRESSEE parameter but not MEDIAL distance from the speaker. Unlike the dual anchor system, the second category of demonstratives in Korean is exclusively addressee-anchored and is not speaker-anchored. We call this system the “addressee anchor-isolated system”.

Mundari has four categories of demonstratives. One of them encodes the parameter of the ADDRESSEE. There are forms used to refer to referents/location in the vicinity of or at the location of the addressee, but not for some distance from the speaker. These facts indicate that Mundari has the addressee anchor-isolated system. Korean has one addressee-anchored category and two speaker-anchored categories, namely PROXIMAL and DISTAL. Mundari has one addressee-anchored category and three speaker-anchored categories, PROXIMAL, MEDIAL, and DISTAL.

The difference between the dual anchor system and the addressee anchor-isolated system has been neglected in reference grammars. Both systems are often undistinguished and described as what we call the addressee anchor-isolated system. Among eleven languages discussed in Imai (2009), six languages, Japanese, Spanish, Venda, Thai, Santali, and Nuer are dual anchor system, while five languages, Korean, Mundari, Mizo, Apatani, and Newari are addressee anchor-isolated system. The speculation based on this finding is that a good number of languages, probably about half of the languages described as having forms encoding the addressee parameter, may belong to the dual anchor system.

### 3.5 Distance

English demonstratives distinguish two degrees of distance from the speaker. Since Korean is an addressee anchor-isolated language, one category out of three categories functions as the addressee anchor, and the other two distinguish two degrees of distance from the speaker. Since Japanese is a dual anchor language, three categories distinguish three degrees of distance from the speaker in addition to the proximity to the addressee denoted by the second category. Mundari demonstratives have four categories, three of which distinguish three degrees of distance from the speaker, with the fourth category reserved for the proximity to the addressee. Thus, English and Korean fall into one group, distinguishing two degrees of distance from the speaker, while Japanese and Mundari fall into another group, distinguishing three degrees of distance from the speaker. About 60% of the 432 languages cited in Imai (2009) distinguish two degrees of distance from the speaker in their demonstrative pronouns or adnominals, and about 30% of them distinguish three degrees of

distance from the speaker.<sup>4</sup> From this, we can infer that two degrees of distance from the speaker's location is the most common in the world's languages (e.g. English, Korean), followed by three-degrees of distance (e.g. Japanese, Spanish, Mundari).

The notion of distance in spatial deixis is not absolute but relative. Imagine a person seeing a huge building located 100 meters away from her. While 100 meters is quite a distance, the image of the building covers most of her visual field. In such a case, *this building* is more appropriate than *that building* when she refers to the building. The referent may be relatively expanded (*this planet*) or contracted (*this stain of the fingertip*) (Hanks 1990: 401). Distance is calculated relatively depending on the size of referents and the speakers' construal of them.

Spatial deixis in all languages include the notion of (relative) distance. Although (relative) distance is not the sole ingredient of spatial deixis, it undeniably constitutes the core meaning of spatial deixis. If the notion of distance is completely lost, the function then turns to a non-deictic element, such as a definite article *the* in English (Diessel 1999: 129).

3.6 Emphatic remote

Thai, Spanish, and Japanese among others have dual anchor systems. The second category denotes either medial distance from the speaker or proximity to the addressee. When there were some cups on a table, speaker uses three distinct forms to refer to each cup according to the distance from the speakers, *kore*, *sore*, and *are* in Japanese, *esta*, *esa*, and *aquella* in Spanish, and *ni*, *nán*, and *nóon* in Thai for a proximal, medial, and distal referent, respectively. The three degrees of distance are distinguished in the same fashion in these languages.

However, when there is a single referent on a table, differences appear in the use of the third category among these languages. As we can see in the following tables, all three categories are used in Japanese depending on the distance, but not in Spanish and Thai. The forms in the third category are not used even for a cup at the far end of a table in the latter two languages.

Table 9: A single referent on a table: Japanese demonstrative pronouns

Spk	0cm	80cm	160cm
<i>kore</i>	<i>kore</i>	<i>kore/sore</i>	<i>sore/are</i>

<sup>4</sup> Diessel (2011) reports that 127 languages have two-way distance contrast and 88 languages have three-way distance contrast in demonstrative adnominals. He categorizes both the Japanese type and the Korean type into a three-way contrast.



**Table 10:** A single referent on a table: Spanish feminine singular demonstrative pronouns/adjectives

Spk	0cm	80cm	160cm
<i>esta</i>	<i>esta</i>	<i>esa</i>	<i>esa</i>

**Table 11:** A single referent on a table: Thai demonstrative pronouns/adjectives

Spk	0cm	80cm	160cm
<i>ní</i>	<i>ní</i>	<i>ní/nán</i>	<i>ní/nán</i>

The third category or “distal” demonstratives in Thai and Spanish are used only when differentiation among referents is required, for instance, to single out one referent from a set of multiple referents. Otherwise, demonstratives in the second category in Thai and Spanish can cover the “distal” region designated by the third term in Japanese. Terasaki’s (1998: 85) description of Spanish accords with the above interpretation. He says, “the designated area by *ese* ‘close to the addressee’ is wider than the Japanese *sore*. Things that the speaker and the addressee have commonly experienced, for instance, a thing they both see can be referred to with *ese* even if it is rather far from both of them.” We call the parameter licensing the third “distal” terms in Thai and Spanish EMPHATIC REMOTE. EMPHATIC REMOTE forms are used when emphasis on remoteness is required or the speaker wants to differentiate a distal referent from others. For instance, a very distal referent that may be hard to identify can be referred to with an emphatic remote form. It may accompany prosodic emphasis such as a stress or prolonged pronunciation.

Another case in which a difference between Japanese without EMPHATIC REMOTE and languages with EMPHATIC REMOTE becomes apparent is when the speaker refers to a star or a cloud. Although stars and clouds are undoubtedly distal referents, Thai and Spanish informants used a form in the second category to denote ‘that cloud’ and ‘that star’. Japanese speakers used the third distal form for a star and a cloud. Using the second form in Japanese is odd unless it is a non-deictic anaphor in a discourse. Imai (2009) reports that Santali, Mundari, Newari, Malagasy, and Venda belong to non-emphatic remote type along with Japanese, while Apatani belongs to the emphatic remote type along with Spanish and Thai.

### 3.7 Contact and controllability

A cup on a table at a medial distance of 80 centimeters from the speaker may be referred to with either proximal *kore*, medial *sore*, or distal *are* in Japanese, depending on the speaker’s conceptualization of the distance; however, once the speaker

leans over the table and touches the cup, only *kore* is allowed. Informants of all of the fifteen languages investigated by Imai (2009) showed the same pattern. When the speaker touches a referent, he/she refers to it with a proximal form. This is a case that we call direct CONTACT. Direct CONTACT by the speaker is the strongest deciding factor to use proximal forms in all languages. Exceptions are cases where the CONTRAST and ABHORRENCE parameters are involved. These parameters will be discussed in Sections 4.7 and 4.8.

When there is a cup on the other end of a table from the speaker and the speaker touches it with a long object like a fishing rod or a stick, Japanese speakers almost always use a proximal form to refer to the cup, which is otherwise unanimously referred to with a distal form. This is a situation called “indirect” CONTACT. The uses of proximal forms appear both in direct and indirect CONTACT in Japanese. That is, whether the CONTACT is made directly with a hand or indirectly with a tool does not make much difference in Japanese. The speaker considers that referent/region contacted or controlled by the speaker is within his/her “territory”. Once the referent is under the speaker’s control and comes into the speaker’s territory, the speaker readily uses a proximal form to refer to it. When the speaker pulls a string attached to a cup at the other end of a table from the speaker, the speaker can still manipulate the cup but has less control than using a rod or a stick. This is another case of indirect CONTACT with less controllability.

In elicitation, when the speaker had indirect contact with a referent, most speakers of Japanese (92% of instances of collected data) used proximal forms. The speakers of other languages, such as Mundari, Korean, Santali, Spanish, Thai, Venda, and Ao also tended to use proximal forms. English turned out to be the least sensitive to indirect CONTACT, by using distal forms approximately half of the instances of the elicited data (Imai 2009: 144). The use of distal forms is understandable because some speakers may not equate direct CONTACT with their own hands, which is a concrete feeling, to indirect CONTACT without a concrete tactile feeling. Indirect CONTACT with a string lowered the use of proximal forms compared to the indirect CONTACT with a rod. Touching a cup with a rod involves more control than pulling the cup with a string. With a rod, the speaker may touch, push, tap on, or manipulate a cup, while the speaker can simply pull the cup but can do nothing else with a string. When the speaker senses more controllability in indirect CONTACT, he/she equates it to direct CONTACT more easily. Thus, in case of indirect contact, the controllability influences the choice between proximal forms and non-proximal forms. In case of direct CONTACT, on the other hand, controllability becomes irrelevant. A big rock which is not manipulable or controllable but directly contacted by the speaker is referred to with a proximal form in English, Japanese, and other languages. Direct CONTACT, either with or without controllability, is sufficient to license the use of a proximal form.

## 4 Parameter priority in the case of a conflict

Some different parameters may conflict in the choice of demonstratives. In such situations, the speaker chooses one out of the candidates of demonstratives based on differences in the priorities of the parameters. In this section, we will show how a parameter wins out over other parameters based on elicited data in Imai (1995, 2009).

### 4.1 Speaker's CONTACT and distance

As we saw in 3.7, the speaker's CONTACT overrides distance. CONTACT is the primary factor for the semantics of spatial deixis. In Japanese, along with many other languages, CONTACT, regardless whether it is direct or indirect, is the almighty parameter to allow or force the speaker to use a proximal form. The speaker's CONTACT overrides the encoding of distance from the speaker.

English is also influenced by CONTACT to some extent. However, speakers of English may still have a choice between proximal forms based on CONTACT or non-proximal forms based on distance in case of indirect CONTACT. Languages are universally sensitive to the speaker's CONTACT, but the degree of sensitivity to directness/indirectness and controllability of CONTACT varies among languages.

### 4.2 Addressee's CONTACT and distance

In the ADDRESSEE parameter, most languages define the addressee's territory in terms of proximity to the addressee in parallel with the speaker's territory. Malagasy and Newari, unlike other languages, have unique means for defining the addressee's territory. Malagasy determines the addressee's territory in terms of controllability but not with mere CONTACT or PROXIMAL distance to the addressee. If the addressee holds a cup in his/her hand, the speaker refers to the cup with *iny*, which denotes the ADDRESSEE parameter as does *so-* in Japanese. However, if the addressee touches a chair but does not move it, the speaker cannot use *iny* to refer to the chair that is close to the addressee. The speaker, in such a case, uses a definite demonstrative (or determiner), which is neutral with respect to distance. Newari speakers used an ADDRESSEE form to a referent contacted by the addressee but not to a referent close to the addressee without CONTACT. Japanese and most of languages define the addressee's territory by either PROXIMAL distance to the addressee or CONTACT by addressee.

### 4.3 Speaker's direct CONTACT versus addressee's direct CONTACT

In Japanese, when the addressee holds something, the speaker points at and refers to it with *so-*, a form encoding the ADDRESSEE parameter. It becomes natural to use a proximal form *ko-* to refer to an object in the addressee's hand if the addressee is

very close to the speaker and the speaker is pointing at. Once the speaker touches it, the use of *ko-* becomes obligatory. In other words, when both the speaker and the addressee make direct contact with a referent, the speaker uses a proximal form. The speaker's direct CONTACT overrides the addressee's direct CONTACT. This dominance was attested in all fifteen languages in Imai (2009).

#### 4.4 Speaker's indirect CONTACT versus addressee's direct CONTACT

In a situation where the speaker uses a rod or a stick and touches a referent in the hand of the addressee, who is at the opposite end of a table, the speaker's indirect CONTACT conflicts with the addressee's direct CONTACT. Although, there is no language whose speakers unanimously use non-proximal forms in such a situation, the choice of demonstratives varies among languages and among speakers. English speakers used both proximal and distal forms. Japanese, Mizo, Mundari, and Spanish speakers used proximal forms and addressee-anchored forms. Korean speakers used proximal, distal, and addressee-anchored forms. Venda speakers used proximal forms and medial forms. Speakers may have difficulty in deciding whether the speaker or the addressee has more control in such a situation. The more the speaker feels he/she has control, the more he/she becomes comfortable in using a proximal form.

Ao, Apatani, Malagasy, Nuer, Santali, Thai, and Nuer speakers used only proximal forms. In these languages, the speaker's indirect CONTACT overrides the addressee's direct CONTACT

#### 4.5 Speaker's PROXIMAL versus addressee's indirect CONTACT

PROXIMAL distance to the speaker and the addressee's indirect CONTACT compete with each other when the addressee at the other end of a table from the speaker uses a long tool and touches a cup in front of the speaker. The cup is in the vicinity of the speaker, but the speaker is not touching the cup directly or indirectly. In such a situation, the majority of speakers of languages in the data used proximal forms. It suggests that proximity to the speaker wins over the addressee's indirect CONTACT.

#### 4.6 Speaker's body part versus addressee's direct CONTACT

In Japanese, when a doctor touches a patient's back and asks the patient whether the area that the doctor is touching hurts, the patient will answer:

- (9) *Hai, soko desu.*  
       yes    there COP  
       'Yes, it's there.'



Figure 8: Patient/Doctor setting

*Soko* ‘there’ encoding the ADDRESSEE parameter is used. *Koko* ‘here’ encoding PROXIMAL cannot be used. Even though the referent, namely the speaker’s body part, is not physically distal from the speaker, the speaker’s body is out of the speaker’s control or out of the speaker’s territory. It is within the addressee’s territory. Therefore, a form encoding the ADDRESSEE parameter is required.

If the speaker/patient touches his/her own back to specify the area to the doctor, the speaker switches to use a proximal form. The speaker now regains his/her own back as his/her territory. It is matter of notion of territory whether the speaker uses a speaker-anchored proximal form or a form encoding ADDRESSEE.

Speakers of addressee-anchored languages such as Japanese, Apatani, Korean, Mizo, Newari, Mundari, Nuer, Santali, Spanish, Thai, Fijian, Sinhalese, and Tagalog use addressee encoding forms in such a situation. The addressee encoding in addressee-anchored languages is the norm in such a situation.

Speakers of English, Arabic, Afrikaans, Khmer, Norwegian, and Danish typically used a distal form in the same situation. A distal form is used because a referent/region controlled by the addressee (but not by the speaker) is construed as being outside the speaker’s territory. These languages lack forms to mark the ADDRESSEE parameter; however, using a distal form to refer to the speaker’s body part which is conceptually under the controlled of the addressee indicates the sensitivity to the addressee.

## 4.7 Contrast

In Japanese and many languages speaker’s direct CONTACT overrides all other parameters. However, there are cases in other languages where speaker’s direct CONTACT is overridden by another parameter.

Hanks (1984: 159) reported about Yucatec Maya that distal *hé?elo?* may be used under explicitly contrastive circumstance (as in, ‘not this one, that one’ – with both

objects in hand). We call the parameter in this example CONTRAST. English also has a contrastive use of demonstratives. When the speaker has one referent in her right hand, and another in her left hand, not all but many English speakers used *this* for one referent and *that* for the other. Other languages reported to have CONTRAST use are Santali (Imai 2009), Muna (Malayo-Polynesian) (Berg 1989: 89), Kannada (Dravidian) (Sridhar 1990: 212), and Bakwiri (Bantu) (Fillmore 1982: 54).

Turkish has three deictic categories. Underhill (1976: 122) noted that *fu-* (in the second category) may be used in contrast with proximal *bu*.

- (10) *Bu-nu mu al-ıyor-sun, fu-nu mu?*  
 DEM-ACC Q buy-PRS-2 DEM-ACC Q  
 ‘Are you buying **this**, or **this**?’ (Underhill 1976: 122)

The function of *fu-* is to draw the addressee’s attention to the referent and create a new joint focus of attention (Levinson 2004; Diessel 2006). This function in Turkish is another example of the CONTRAST parameter. The CONTRAST parameter may be construed as drawing the addressee’s attention to the second referent. However, it was confirmed by Turkish speakers that once the two referents are held by the speaker, the use of *fu-* of drawing attention is no longer available. It implies that in Turkish, as in Japanese and many other languages, the speaker’s direct CONTACT is given priority over CONTRAST.

## 4.8 Abhorrence

In English, when the speaker is barely holding a filthy object with his/her fingers, either *this* or *that* can be used. This is another case that speaker’s direct CONTACT is overridden by another parameter.

- (11) *This/that one really stinks.*



Figure 9: ABHORRENCE

In such a case, the speaker's abhorrence of the object makes the speaker construe the object as being at a distance psychologically (Lyons 1981: 235).

This use, namely an ABHORRENCE parameter, was observed in only two languages in the data of Imai (2009). A few speakers of English (two out of seven informants) and Santali (three out of eight informants) used a non-proximal form in such a situation. ABHORRENCE may not be wide-spread in world languages. Speakers of Japanese and many other languages must use proximal forms as long as they are holding a referent (but see Section 4.7). Although CONTACT is dominant and this parameter forces use of a proximal form for a referent touched by the speaker in many languages, this restriction is relaxed in English and Santali.

## 5 Conclusion

An anchor is the basis on which parameters of spatial deixis are calculated. The speaker is the primary anchor for demonstratives in all languages. The addressee is the secondary anchor for some languages, next to the indispensable speaker anchor. There exist two different systems of addressee anchor systems: the dual anchor system and the addressee anchor-isolated system. In the dual anchor system, a demonstrative that indicates a referent/region within the addressee's territory can also indicate some distance from the speaker. Languages with the addressee-isolated system have forms exclusively used to designate the addressee's territory. The same forms cannot indicate distance from the speaker. Japanese, Spanish, Venda, Thai, Santali, and Nuer belong to the dual anchor system, while Korean, Mundari, Mizo, Apatani, and Newari belong to addressee anchor-isolated system among languages discussed in this chapter. These facts imply that about half of the languages encoding the addressee parameter in world languages may belong to the dual anchor system along with Japanese, and the other half may belong to addressee anchor-isolated system along with Korean.

We have looked at not only overt parameters but also covert or implicit parameters that are not morphologically explicit in demonstratives but play a substantial role in the use of demonstratives. In Japanese and many other languages, speaker's CONTACT is the strongest parameter determining the territory of the speaker. The speaker's direct/indirect CONTACT overrides relative distance from the speaker. The speaker's direct CONTACT also overrides the addressee's direct CONTACT. CONTACT by a speaker licenses controllability to the speaker. If the speaker's control is taken over by the addressee, as exemplified in the situation when a doctor (addressee) is touching the patient's (speaker) back, the speaker's back falls into the addressee's territory and is referred to with a demonstrative designating the territory outside of the speaker, namely with a form referring to the addressee's territory in addressee-anchored systems, or with a non-proximal form in speaker-anchored systems. Using

a non-proximal form in languages of speaker-anchored systems implies sensitivity to the addressee's territory even though those languages do not have forms exclusively indicating the territory of the addressee.

Although the speaker's direct CONTACT parameter is not overridden by other parameters in most languages, some languages may allow deviation from the dominance of CONTACT by the speaker. The use of non-proximal form in CONTRAST and ABHORRENCE observed in English and Santali is the example of such a deviation, which is not allowed in Japanese and most of languages. Spatial deixis in Japanese reflects the strong tendency of the dominance of CONTACT and controllability by the speaker.

In this chapter, we examined usages of *genba shiji* (exophoric/deictic usage) of demonstratives. Another function of demonstratives is *bunmyaku shiji* (endophoric/non-deictic usage), which has been extensively studied in the field of *Kokugogaku* or *Nihongogaku* (Japanese-language studies). Comparative studies of *bunmyaku shiji*, especially with Chinese and Korean, have been emerging. It is hoped that more comparative research with other languages in both *genba shiji* and *bunmyaku shiji* will be conducted for better understanding of demonstratives of Japanese and other languages.

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Hideki Kimura

# 18 ‘Who’, ‘what’, and ‘which’ in Japanese and Chinese

## 1 Introduction

A great number of the world’s languages lexicalize interrogatives used to ask about “persons” and those used to ask about “things” differently. And, in many of those languages, the interrogative used to inquire about “persons” is used exclusively for asking about “persons”, but the interrogative used to inquire about “things” is not limited to inquiries about “things” in the narrow sense but can be used broadly to inquire about a variety of categories. Japanese is one such language: in contrast to *dare*, which is used exclusively in inquiries about “persons”, *NANI* – which is realized in the two alternative forms *nani* and *nan* – is used in inquiries about “entities” that cannot be termed “things” in the narrow sense, as in *Nani ga tabetai?* [what NOM eat.DESI] ‘What do you want to eat?’ *Momo ga tabetai.* [peach NOM eat.DESI] ‘I want to eat a peach’, *Nan-mai desu ka?* [how.many-CLF COP Q] ‘How many sheets will it be?’ *Go-mai desu.* [five-CLF COP] ‘That’s five sheets’, *Nani-iro desu ka?* [what-color COP Q] ‘What color is it?’ *Murasaki-iro desu.* [purple-color COP] ‘It’s purple.’, or *Nan to kaite arimasu ka?* [what QUOT write.GER exist.POL Q] ‘What does it say?’ *Wao to kaite arimasu.* [wow QUOT write.GER exist.POL] ‘It says, “Wow!”’.

In traditional Japanese grammars, the various categories that *NANI* can be used to inquire about have been grouped together and termed “things” with the descriptive statement: *NANI* is an interrogative word referring to ‘things’. In Morita (1980: 365), for example, *NANI* is described as “the word used to refer to a *thing* when the item or circumstances are unknown to the speaker or to the hearer”. The word “things” as used here is a term that bundles together a wide variety of objects without necessarily clearly delimiting what is included. Traditional Japanese grammar researchers have shown no theoretical interest in the fact that, whereas *dare* ‘who’ is semantically exclusive, *NANI* is semantically eclectic. That is, the fundamental question of why the meaning of *NANI* is wide-ranging has not previously been raised.

Traditionally both *dare* and *NANI* have been grouped together in a single category as “interrogative pronouns”, but in reality, *NANI* is furnished with a number of grammatical functions that the noun-equivalent *dare* does not have. Why is it the case that the grammatical functions of *NANI* are so much more varied than those of *dare*? No satisfactory explanation has previously been offered for this fact. Research on interrogative *sentences* has a long history within Japanese grammar studies producing a great many arguments and observations, but studies on the meanings and

uses of interrogative words themselves have been almost totally lacking, other than a few descriptive studies like Alfonso (1974), Martin (1975), and Morita (1980).

The opposition of “persons” and “things” is a basic dichotomy both ontologically and cognitively and, reflecting this fact, linguistic differentiation between them is observed in various forms transcending differences among individual languages. Clarifying the semantic functions of and closing in on the essential nature of Japanese interrogatives, which have been lexicalized with two different forms corresponding to this ontological and cognitive opposition, is a meaningful exercise, for Japanese grammar as well as for the fields of comparative grammar and linguistic typology.

The goal of this chapter is to elucidate the characteristics of Japanese interrogatives used to inquire about “persons” and “things” through a comparison with Chinese. In Chinese, as in Japanese, interrogatives referring to “persons” and those referring to “things” are lexicalized in different forms (Zhu 1982). *Shei* is used exclusively in inquiries about “persons”, whereas *shenme* is used to inquire about a variety of objects, not just “things”. They show many similarities to Japanese *dare* and *NANI*, but, at the same time, naturally enough, they also differ on a number of points. This chapter will primarily consider *dare* and *NANI*, which are used to inquire about “persons” and “things”, respectively, and will also take into consideration together with these *dore* and *dotti*, which are also used to refer to both “persons” and “things”. The intent is to treat the oppositions among these four forms organically, clarifying their semantic functions from a functional perspective through a comparison of the similar but different Japanese and Chinese interrogatives.

## 2 Interrogative sentences and words in Japanese and Chinese

Before taking up the main topic of this chapter, an introduction to the structure of wh-questions in Japanese and Chinese and an overview of the interrogative words in each language is in order.

Both Japanese and Chinese are nominative-accusative languages with the agent of an action appearing in the subject position and the patient of the action in the object position. The basic word order of Japanese, however, is SOV and that of Chinese SVO. In addition, Japanese is a postpositional language while Chinese is prepositional.

The structure of the kind of interrogative sentence that will be examined in this chapter, wh-questions, is the same as that of a declarative sentence in both Japanese and Chinese. That is, as shown in (1) and (2), there is no obligatory wh-movement in either language moving the interrogative to the head of the sentence as there is in English wh-questions.

- (1) *Anata wa koko de nani o mite iru no?*  
 you TOP here LOC what ACC see.GER be.PRS Q  
 'What are you looking at here?'
- (2) *Ni zai zher kan shenme?*  
 You LOC here see what  
 'What are you looking at here?'

In the Chinese sentence (2), *zai* is a preposition showing location and corresponds to the postposition *de* in the Japanese sentence. In (1) *nani* and in (2) *shenme* carry the patient role as interrogatives meaning 'what'. In neither sentence does the interrogative move to the head of the sentence, remaining instead in the position in which a patient NP would be placed in a declarative sentence – that is, the interrogative remains *in situ*.

Furthermore, Chinese is an isolating language and has no morphological or syntactic means of indicating tense. Example (2) could, in fact, be taken as referring either to the current state of affairs or to something in the past. In Chinese, whether a statement refers to a current state of affairs or to a past situation is determined by context.

Interrogative words in Japanese and Chinese have the following forms. Table 1 is sorted by part of speech from the viewpoint of syntactic function.

**Table 1:** Interrogative words in Japanese and Chinese

Morphological Forms	Japanese Interrogatives	Chinese Interrogatives
I. Nominal Forms	<i>dare</i> 'who', <i>nani/nan</i> 'what', <i>ikutu</i> 'how many', <i>ikura</i> 'how many, how much', <i>itu</i> 'when'	<i>shei</i> 'who', <i>shenme</i> 'what', <i>duoshao</i> 'how many, how much'
II. Demonstrative Forms	<i>dore</i> 'which (multiple choices)', <i>dotti</i> 'which (two choices)', <i>doko</i> 'where', <i>doo</i> 'how', <i>donna</i> 'what kind of', <i>doosite</i> 'why'	<i>neige</i> 'which', <i>nar</i> 'where', <i>nabian</i> 'which way', <i>zenmeyang</i> 'how', <i>zenme</i> 'how (means)', <i>duo</i> 'how (degree)'
III. Numerical Forms	<i>nan</i> 'what number'	<i>ji</i> 'which fundamental number'
IV. Adverbial Forms (J), Noun-phrasal Forms (C)	<i>naze</i> 'why'	<i>shenme-shihou</i> 'when'
V. Prepositional-phrasal Forms		<i>wei-shenme</i> 'why'

Of these forms, this chapter will consider the Japanese forms used in inquiries about "persons" and "things": *dare* 'who', *NANI* 'what', *dore* 'which (multiple choices)', and *dotti* 'which (two choices)', as well as the three semantically corresponding Chinese

forms, namely the nominals *shei* ‘who’ and *shenme* ‘what’ and the demonstrative *neige* ‘which’.

Many of the forms in the table above, in both Japanese and Chinese, can also be used as indeterminates or as universals with specific morphological or syntactic marking. Japanese shows the meanings *some*~, *no*~, and *any*~, respectively, through addition of the particles *ka* and *ya*, *mo*, and *demo* to the interrogatives. In Chinese, they may be used in a yes-no question with the question particle *ma* added at the end of the sentence, they may be used in a declarative sentence that is clearly marked as such in some manner, or they may be used in collocation with the adverb *dou* ‘all’, yielding forms expressing the meanings *some*~, *no*~, or *any*~. In Japanese language studies, there are some who take the position that these forms should be called “indeterminates” rather than “interrogatives” in recognition of these uses (Martin 1975). However, this chapter will adopt the term “interrogative” rather than “indeterminate” for two reasons (Li and Thompson 1989; Masuoka and Takubo 1992). The first reason is that, in both Japanese and Chinese, these forms must be clearly marked in some way in order to be used as indeterminates or universals, the unmarked form always being used in an interrogative sense. The second reason is that the arguments in this chapter pertain to these forms functioning semantically as interrogatives, not to their uses functioning semantically as indeterminates or as universals.

### 3 Regarding “*Dare*” – with comparison to *shei*

This section examines Japanese *dare* and Chinese *shei* referring to “persons” and demonstrates the fact that they both have two types of semantic function. In one function they seek a property description with regard to a specified person. In the other function they seek a selective specification with regard to a particular person. Furthermore, as shown in Table 1, the syntactic functions of both *dare* and *shei* match those of nouns in each language. The term “interrogative noun” is thus appropriate for the forms *dare* and *shei*.

#### 3.1 Property description function

Roughly divided, *dare* has two types of semantic function. The first, shown in (3), is to attempt to identify a particular individual by inquiring as to what kind of person the person under consideration is – that is, by seeking a description of the properties or attributes of the individual. Here we will refer to this use as the “property description function”. Chinese *shei* also has the same kind of function.

- (3) Q: *Yukawa Hideki tte dare?*  
 Yukawa Hideki QUOT who  
 'Who is Hideki Yukawa?'

A: *Nihonzin de hazimete Nooberu-Syoo o*  
 Japanese.person COP.GER first.time Nobel-Prize ACC  
*totta kagakusya da yo.*  
 get.PST scientist COP SFP  
 'He's the first Japanese scientist to receive the Nobel Prize.'

### 3.2 Individual specification function

The other semantic function *dare* has is to, positing a number of persons as possible choices regarding an unknown or uncertain element among the participants making up a proposition, seek specification of the relevant individual from the hearer and attempt identification of that individual. Here we will refer to this as the "individual specification function". Chinese *shei* also has the same kind of function.

When *dare* or *shei* are used in this function, there may be a clearly delimited set of possible choices, as in (4), or the set of possible choices may not be clearly expressed, as in (5).

- (4) *Watasitai no kurasu-meeto no naka de wa, anata wa*  
 we GEN class-mate GEN among within TOP you TOP  
*dare ga itiban suki desu ka?*  
 who NOM most like COP Q  
 'Who among our classmates do you like best?'

- (5) Q: *Yamada-san ga kekkon suru n da tte.*  
 Yamada-Ms NOM marry do that COP QUOT  
 'I hear Ms Yamada is getting married.'

A: *Dare ni kiita no?*  
 who DAT hear.PST Q  
 'Who did you hear that from?'

Even cases like (5), where the range of choices may not be clearly expressed contextually, when using *dare* or *shei* the speaker normally has in mind some limited range of possible choices. In (5), for example, the speaker can be considered to implicitly posit a fixed set of possibilities composed of known persons, such as colleagues, friends, or neighbors. If, hypothetically, there were no such postulation, that is, if *dare* or *shei* were used with no presupposed range, the acceptability of the question

declines. The *dare* in (6), for example, is felt to be pragmatically inappropriate. The # mark in example (6) and in following examples indicates that the expression is pragmatically inappropriate.

- (6) Q: *10-nen hodo mae ni Amerika de 5000.man doru*  
 10-years about before LOC America LOC 5000.ten-thousand dollars  
*no takara.kuzi o ateta hito ga iru n da tte.*  
 GEN lottery ACC win.PST person NOM be.PRS that COP QUOT  
 ‘I hear someone won 50 million dollars in a lottery in America 10 years ago.’

A: #*Dare ga ateta no?*  
 Who NOM win.PST Q  
 ‘Who won it?’

Both *dare* and *shei* typically seek the specification of the relevant person in the form of stating a concrete individual name and in that sense the “individual specification function” that *dare* and *shei* bear is typically a specification through naming – that is, the function of seeking a “designation”.

The individual specification function of *dare* and that of *shei* differ with respect to their appropriateness in questions requiring a choice between two alternatives. When the possible choices include three or more candidates as in (4) and (5), use of both *dare* and *shei* is appropriate, but when the choice is from just two alternatives, only *shei* functions appropriately and *dare* does not. Compared to *shei*, which can be used appropriately as long as there are two or more possible choices – that is, with plural choices – *dare* can only be used when there are three or more possibilities. *Shei* in (7) is not problematic, but the *dare* in (8) is clearly unnatural and here *dotti* ‘which’, to be taken up later, functions appropriately.

- (7) *Xiaolong he Xiaoming, ni xihuan shei?*  
 Xiaolong and Xiaoming you like who  
 ‘Between Xiaolong and Xiaoming, who do you prefer/like?’

- (8) *Taroo to Ziroo nara, anata wa {\*dare / dotti} ga*  
 Taro and Jiro COP.PROV you TOP { who / which} NOM  
*suki desu ka?*  
 like COP Q  
 ‘Of Taro and Jiro, {who/which} do you like?’

When trying to identify the person in question from a delimited group made up of a number of persons, one can imagine a case in which what is sought is the deictic indication of the target person from a group present at the location where the interaction is taking place – a case that typically seeks an indication accompanied by the



action of finger pointing. In such a case, the use of both *dare* and *shei* is subject to a certain restriction. Suppose, for example, that, in a party situation, the speaker knows that a person named “Taro Yamada” is present but has not been able to identify that individual. In such a case, the speaker would seek to have the hearer indicate “Taro Yamada” deictically. In this case the use of *dare* in Japanese is subject to this restriction: in (9), *dare* is clearly pragmatically unnatural compared to *dore* ‘which’, to be discussed later.

(9) (At a party)

- Q: *Ano hitotati, minna sakkaa-bu no buin desyoo?*  
 those people all soccer-club GEN club.member COP.PRES  
 {*Dore* / #*dare*} *ga Yamada Taroo desu ka?*  
 {which / who} NOM Yamada Taro COP Q  
 ‘Those people over there are all members of the soccer club, aren’t they? |  
 {Which one / who} is Taro Yamada?’
- A: *Ano hito desu. Kauntaa no mae de biiru o*  
 that person COP counter GEN front LOC beer ACC  
*nonde-ru ano hito.*  
 drink.GER-be that person  
 ‘He’s that guy over there, the guy drinking beer over in front of the  
 counter.’

The acceptability is clearly reduced if *dare* is used in the subject position of a copula sentence when a deictic indication is sought concerning a person present at the place of speech as in (9). In the same circumstances as (9), use of *shei* would also be pragmatically inappropriate and *neige* ‘which’, to be discussed later, would be appropriate instead.

Based on these observations, the functions of *dare* and *shei* may be summarized as follows. *Dare* and *shei* are interrogative words used with the intent of identifying a person. They both have the two functions of property description and individual specification. In the “individual specification function”, *dare* is appropriate only when the set of possible candidates consists of three or more members and is not appropriate for a choice between two candidates. *Shei* is subject to no such restriction and is appropriate for sets of any number of candidates, including a binary choice. Furthermore, the acceptability of both *dare* and *shei* is reduced in a situation in which the respondent is asked to indicate the choice deictically from a set of persons present in the speech environment. In other words, neither *dare* nor *shei* is appropriate in the archetypical indication function of direct deixis. This underscores the fact that neither of these two forms is an interrogative **demonstrative**, but, rather, both are interrogative **nouns**. That is, the specification these two forms seek is not the deictic indication of an individual but the specification of or reference to an individual.

## 4 Regarding “*NANI*” – with comparison to *shenme*

This section examines Japanese *NANI* and Chinese *shenme*, which have both been explained in the past simply as forms used in inquiries about “things”, and demonstrates that they also have two types of function. One is to ask for a property description of the “entity” being inquired about. The other function is to seek a categorial specification or conceptual specification of the “entity” being inquired about. *NANI* appears in the two forms *nan* and *nani*, of which *nani* is a free form and can stand alone syntactically and *nan* is a bound form and must always be bound to a following element. We will return to the distinction between the two forms below, but for the time being, we will use *nani* or *nan* in example sentences as appropriate.

### 4.1 Property description function

The semantic functions carried by *NANI* can be broadly divided into two. One, as shown in examples (10), (11), and (12), is to ask what kind of “entity” the target is, that is, by seeking a property description or, put another way, by seeking an intensional description, to gain an understanding of the true identity of the target in question. Whereas *dare* seeks a property description of a particular individual person, *NANI* seeks a property description of a number of various “entities”.

- (10) Q: *“Saibasi” tte, nani?*  
 saibashi QUOT what  
 ‘What are “saibashi”?’

A: *Ryoori no toki ni tukau nagai hasi da yo.*  
 cooking GEN time at use long chopsticks COP SFP  
 ‘They are long chopsticks used when cooking.’

- (11) Q: *Ano hito wa, anata no nan desu ka?*  
 that person TOP you GEN what COP Q  
 ‘What is that person to you?’

A: *Ano hito wa, watasi no tuma no imooto no*  
 that person TOP I GEN wife GEN younger.sister GEN  
*otto no dooryoo desu.*  
 husband GEN colleague COP  
 ‘S/he is a colleague of my wife’s younger sister’s husband.’

- (12) Q: *Syoorai no yume wa nan desu ka?*  
 future GEN dream TOP what COP Q  
 ‘What is your dream for your future?’

A: *Puro no sakkaa-sensyu ni naru koto desu.*  
 Pro GEN soccer-athlete DAT become that COP  
 'It is to become a professional soccer player.'

The "entities" with regard to which *NANI* can be used are not limited to concrete "things" but can also be abstract "entities", such as "dream" in (12). In (13) and (14) a description is sought of a "reason" and a "statement", neither of which is a type of "entity" that could be termed a concrete "thing".

(13) Q: *Kono heya, nan de konna ni kurai no?*  
 this room what for this.degree ADV dark Q  
 'How come this room is so dark?'

A: *Mado ga nakute, sikamo syoomei ga kowarete iru n desu.*  
 window NOM not.exist.GER moreover lighting NOM  
 break.GER be.PRS that COP  
 'There are no windows and, in addition, the lighting is broken.'

(14) Q: *Kare wa, nan to itte imasu ka?*  
 he TOP what QUOT say.GER be.POL Q  
 'What is he saying?'

A: *"Sini-soo ni nemui yo" to itte-masu.*  
 die-be.about.to ADV sleepy SFP QUOT say.GER-be.POL  
 'He says he's so tired he feels like he's about to pass away.'

With the exception of "time", *NANI* can be used to refer to any sort of "entity", be it a "thing", a "person", or a "location". Chinese *shenme*, too, can be used to seek a property description of any sort of "entity", with the exception again of "time".

Furthermore, *NANI* used in this function appears in two alternative forms: when the following word begins with an alveolar plosive consonant, like [t] or [d], it appears as *nan*, as shown in (11) through (14) and in other environments it appears as *nani*, as shown in (10). The *nani* in (10) can not be replaced by *nan* and, conversely, the *nan* in (11) through (14) cannot be replaced by *nani*.

## 4.2 Category specification function

### 4.2.1 *NANI* used as an independent syntactic constituent

The other semantic function of *NANI* is to, with regard to a variety of "entities", try to gain an understanding of some relevant entity by seeking a categorial or conceptual specification of some unknown or uncertain element among the participants in

a proposition. Here we will refer to this as the “category specification function”. When *NANI* is used in this function, it cannot be used in reference to “persons”, “locations”, or “times”. When seeking specification of “persons”, “locations”, or “times”, respectively, *dare*, *doko* ‘where’, and *itsu* ‘when’ are used.

*NANI* in this function is sometimes used occupying a syntactic slot, that is, as a direct syntactic constituent, or it is sometimes used as an internal constituent in a compound of the form “*nan* + classifier”. This latter use will be treated in Section 4.2.2; here we will consider the first use.

The “category specification function” *NANI* carries differs from the “individual specification function” of *dare* in that it does not seek the selective specification of a particular individual. This difference is clear from the fact that, in the answer sentences in examples (15) and (16), the answer “a person/someone” is pragmatically inappropriate in (15) whereas “a taxi” in the answer in (16) is pragmatically appropriate.

- (15) Q: *Dare o matte iru n desu ka?*  
 who ACC wait.GER be.PRS that COP Q  
 ‘Who are you waiting for?’

A: *#Hito o matte iru n desu.*  
 person ACC wait.GER be.PRS that COP  
 ‘I’m waiting for a person/someone.’

- (16) Q: *Nani o matte iru n desu ka?*  
 what ACC wait.GER be.PRS that COP Q  
 ‘What are you waiting for?’

A: *Takusii o matte iru n desu.*  
 taxi ACC wait.GER be.PRS that COP  
 ‘I’m waiting for a taxi.’

Because *dare* is an interrogative that seeks the specification of an individual, a conceptually generic expression as a response, like “a person/someone”, that does not lead to the identification of a particular individual is felt to be inappropriate. The inappropriateness of “a person/someone” in (15) is due to this fact. A response to *dare* must use a nominal expression that refers to a particular individual, such as “Ms Yamada” or “my teacher”. In contrast, this is not the case for a response to *NANI*. The “a taxi” in the response in (16) does not refer to any particular individual taxi. Rather, “(a) taxi” here is a generic category name that contrasts with “(a) bus” or “(a) train” and is an expression that remains on the conceptual level. None-the-less, the response in (16) is a completely acceptable response to the question posed. This is undoubtedly due to the fact that *NANI* is a form that seeks a category specification.

In some cases, as in (17), the response to a question using *NANI* may refer to a particular individual, but this is due to pragmatic consideration on the part of the responder and not because *NANI* itself seeks an individual specification.

- (17) Q: *Nani o sagasite iru n desu ka?*  
 what ACC search.GER be.PRS that COP Q  
 'What are you looking for?'

A: *Taroo no zitensya o sagasite iru n desu.*  
 Taro GEN bicycle ACC search.GER be.PRS that COP  
 'I'm looking for Taro's bicycle.'

What is important here is the recognition that the questioner using a *NANI* question is not seeking a response that refers to a particular individual and that a response that stops on the conceptual level with a generic naming or specification is sufficient. Traditionally the description of *dare* and *NANI* have been that "*dare* inquires about 'people' and *NANI* inquires about 'objects', namely 'things' and 'matters'" and the differences between *dare* and *NANI* have been described as if they were simply paradigmatic semantic differences in the entities about which an inquiry is being made. However, it is difficult to regard such a description fully appropriate for grasping the more substantial differences between them. The substantive difference between them should be taken as a referential opposition in whether what is sought is a category specification or an individual specification.

In examples (18) and (19), below, specification of the relevant object is sought from among a delimited group made up of three or more candidates.

- (18) *Kono resutoran wa, nani ga itiban oisii desu ka?*  
 this restaurant TOP what NOM most delicious POL Q  
 'What is best at this restaurant?'

- (19) *Biiru to wain to uisukii dattara, nani ga nomi-tai desu ka?*  
 beer and wine and whiskey COP.COND what NOM drink-DESI POL Q  
 'Of beer, wine, or whiskey, what do you want to drink?'

The response *NANI* seeks here too, unlike the case of *dare*, is a specification at the conceptual level, that is, a category specification, and not the specification of a particular individual. If *NANI* should be used in a question that seeks a specification from among a set of individual items, then, as shown in (20), the acceptability of the sentence is drastically reduced. In a question inquiring about the choice of an individual "entity", *dore* 'which', which will be discussed shortly, is appropriate.

- (20) *Watasi no ziten-sya to kare no ziten-sya to anata no ziten-sya*  
 I GEN bicycle and he GEN bicycle and you GEN bicycle  
*dattara, {\*nani / dore} ga itiban nori-yasui desu ka?*  
 COP.COND { what / which} NOM most ride-easy.to POL Q  
 ‘Of my bicycle, his bicycle, and your bicycle, which is the easiest to ride?’

*NANI* does not have the function of seeking specification of a particular individual item in this way. Accordingly, *NANI* is also inappropriate for seeking the deictic specification of some concrete individual item located at the place of speech. *NANI* in (21) is unnatural and here, too, *dore* is the appropriate form.

- (21) *Koko ni aru san-dai no pasokon no*  
 here LOC exist three-CLF GEN personal.computer GEN  
*naka de wa {\*nani / dore} ga itiban tukai-yasui desu ka?*  
 among within TOP { what / which} NOM most use-easy.to POL Q  
 ‘Of the three personal computers here, which is the easiest to use?’

As is clear from the facts above, *NANI* is a form that calls for specification or naming, not for indication, and it shares this characteristic with *dare*. *NANI* also typically calls for a response that gives a category title, like “taxi” or “beer”, and calls for specification by naming. However, whereas *dare* seeks the individual specification with regard to a “person”, *NANI* calls for the categorial or conceptual specification with regard to an “entity” other than a “person”, “location”, or “time” and, on this point, the two differ in terms of referentiality.

There is another notable difference between *dare* and *NANI*. Whereas *dare* normally calls for a selection from among a fixed set of possible candidates, as described earlier (cf. (5) and (6)), it is possible to use *NANI* without postulating any limit at all on possible choices. Consider example (22).

- (22) Q: *Taroo wa konkai no kaigai-ryokoo de, tottemo*  
 Taro TOP this.time GEN abroad-trip LOC very  
*kandoo sita soo da yo.*  
 be.moved do.PST EVID COP SFP  
 ‘I hear Taro was really impressed on his last trip abroad.’  
 A: *Nani ni kandoo sita no?*  
 what DAT be.moved do.PST Q  
 ‘What was he impressed by?’

In essence, *dare* is a form that calls for specification of an individual from a closed group of possible candidates while *NANI* is a form that typically calls for specification of an abstract category associated at the conceptual level with an open “entity”

set. It is precisely these characteristics of *NANI*, that the objects asked about are open-ended and that the responses sought are conceptual and abstract, that make possible the unique extension of this form – not possible with *dare* – to a wide variety of uses. One such use is to inquire about “actions”.

Paired with the formal verb *suru* ‘do’, *NANI* forms the interrogative expression *nani o suru* [what ACC do] ‘do what’. The verb phrase expression *nani o suru* appears on the surface to be a question in which the direct object *nani* ‘what’ asks about a “thing”, but actually it is not. As shown in (23), the pattern *nani o suru* as a whole asks about the content or type of an action itself.

- (23) Q: *Anata wa kono kurai heya de nani o site ita no?*  
 you TOP this dark room LOC what ACC do.GER be.PST Q  
 ‘What were you doing in this dark room?’

A: *Meisoo site ita no desu.*  
 meditation do.GER be.PST that COP  
 ‘I was meditating.’

In Japanese, as in many other languages, there is no single word that could be termed an “interrogative verb”. The syntactic phrase *nani o suru* fills the void left by the lack of such an interrogative verb form. The formation of such an interrogative expression, one that asks the **content** of an “action” or the **type** of an “action” is possible precisely because *NANI* is a form that calls for an abstract category and not for a concrete individual item.

Additionally, *nani*, like *dare*, is not suitable for questions that require selection of one of two alternatives. The *nani* in (24) is clearly unnatural. As will be discussed later, in Japanese, *dotti* is suitable for questions calling for the selection of one of two alternatives.

- (24) *Biiru to uisukii dattara {\*nani / dotti} ga suki desu ka?*  
 beer and whiskey COP.COND { what / which} NOM like COP Q  
 ‘Of beer and whiskey, which do you prefer?’

When *NANI* is used in its category specification function, it normally appears in the form *nani* and not the form *nan*, except when followed by the case particle *ni*. In both (25) and (26), the initial consonant of the case particle following *NANI* is the alveolar plosive [d], but in (25) the form *nani* is appropriate and in (26) it is *nan*. The reason for this difference is that in (25) *NANI* seeks the specification of the “means” of the action, such as “poster”, “home page”, or “newspaper advertisement”, whereas in (26) it seeks the **description** of a “reason”, as in example (13). The *NANI* that seeks an intensional description, as noted in Section 4.1, appears in the form *nan* when the following word begins with an alveolar plosive, but the

*NANI* that seeks a category specification appears as *nani*, uninfluenced by the initial alveolar plosive consonant of a following word.

- (25) *Kono kooenkai no koto wa {nani / \*nan} de*  
 this lecture GEN fact TOP {nani / nan} by.means.of  
*sirimasita ka? Posutaa desu ka? Hoomupeezi desu ka?*  
 find.out Q poster COP Q homepage COP Q  
*Soretomo sinbun-kookoku desu ka?*  
 or.rather newspaper-advertisement COP Q  
 ‘How did you find out about this lecture? Poster? Webpage? Newspaper ad?’
- (26) *Kono kooenkai wa {\*nani / nan} de konna ni*  
 this lecture TOP {nani / nan} for this.way ADV  
*sankasya ga sukunai no desu ka?*  
 participant NOM few that COP Q  
 ‘Why are there so few participants at this lecture?’

*NANI* in (27) also appears before the case particle *to* with an initial alveolar plosive [t] but here, too, because what is sought is the specification of the object of the action *butukaru* ‘collide’, *nani* is appropriate and *nan* seems unnatural. This contrasts with example (14) in which what was sought was a description of the content of an utterance and *NANI* appeared as *nan*.

- (27) *Kare no zityensya wa, {nani / \*nan} to butukatta no desu ka?*  
 he GEN bicycle TOP {nani / nan} with collide that COP Q  
 ‘What did his bicycle collide with?’

There is one exceptional case in which *NANI* used seeking a category specification appears as *nan*, namely, when it appears before the case particle *ni*. In (28) either *nani* or *nan* is possible.

- (28) Q: *Ookiku nattara, {nani / nan} ni nari-tai?*  
 big.ADV become.COND {nani / nan} DAT become-DESI  
 ‘What do you want to be when you grow up?’
- A: *Puro no sakkaa-sensyu ni nari-tai.*  
 pro GEN soccer-athlete DAT become-DESI  
 ‘I want to be a professional soccer player.’

This is due to dissimilation to avoid the repetition that would arise because the final *ni* syllable of *nani* is the same as the following case particle *ni*. That is, this is an exceptional phenomenon arising from phonological conditioning.



#### 4.2.2 Regarding the “*nan* + classifier” pattern

*NANI* also appears in compounds of the form “*nan* + classifier” with the function of questioning number. In Japanese, numerical expressions appear as compounds of the form “number + classifier” with the number and classifier directly attached, as in *3-satu (no hon)* ‘three-classifier (GEN book)’ or *45-dai (no kuruma)* ‘45-classifier (GEN vehicle)’. *Nan* is used in the numeral position to create a form that seeks the designation of a “number” that is undetermined or unknown, as in (29). In this structure, only *nan* is used, never *nani*.

- (29) Q: *Ookina hoteru desu ne. Zenbu de nan-situ ari-masu ka?*  
           big       hotel   COP   SFP   all       in   nan-CLF   are-POL   Q  
           ‘Quite a big hotel. How many rooms do you have in all?’

A: *Roppyaku-situ ari-masu.*  
      600-CLF       are-POL  
      ‘We have 600 rooms.’

The function of the *NANI* occurring in this construction can be interpreted as one in which the category specification function of *NANI* discussed in Section 4.2.1 appears with category particularized to “number”. Considering this fact, together with the fact that the *NANI* occurring in this kind of construction is uniformly *nan* and never *nani*, it may be thought that the *NANI* here is a form that has been extended from an interrogative noun and has been reanalyzed as an “interrogative numeral”.

#### 4.2.3 Regarding Chinese *shenme*

Chinese *shenme*, like *NANI*, functions as an interrogative seeking a category specification with regard to a variety of “entities”, excepting “persons”, “locations”, and “times”. However, the syntactic behavior of *shenme* is subject to a certain constraint.

When *shenme* is used in this kind of function, generally it is used in a pattern directly modifying a noun, as in (30), or as the object of a verb, as in (2); if it is used in other syntactic positions, for example in subject position or as the object of a preposition, acceptability decreases drastically. Example (31), with *shenme* used as a subject, is clearly of low acceptability compared to (30).

- (30) *Zhei-ge canting, shenme cai zui haochi?*  
      this-CLF restaurant what food most delicious  
      ‘What dish is the best at this restaurant?’

- (31) ??*Zhei-ge canting, shenme zui haochi?*  
      this-CLF restaurant what most delicious  
      ‘What is best at this restaurant?’

As seen in example (18), earlier, there is no problem in Japanese with using *NANI* alone in the subject position. In contrast, the acceptability of *shenme* in subject position is low and the appropriate Chinese equivalent to (18) is (30) rather than (31). Whereas the single word *NANI* in Japanese can fulfill the function of seeking a category specification alone, Chinese requires a noun phrase of the form “*shenme* + noun” to fulfill this function.

*Shenme* used seeking a category specification is typically used in a phrasal pattern – either “*shenme* + noun” or “verb + *shenme*”. The former construction forms a noun phrase and the latter a verb phrase, and the syntactic status of *shenme* is different in each, but they have in common the fact that in both *shenme* is a complement to the head of the phrase. In addition, they both have in common the fact that they seek a categorial specification of the type of “entity” referenced by the head or of its contents. Namely, in the pattern “*shenme* + noun” (for example, *shenme cai* ‘what dish’ or *shenme huar* ‘what flower’), *shenme* calls for a categorial specification of the type of, or content of, the head noun and in the pattern “verb + *shenme*” (for example, *zuo shenme* ‘make what’ or *hua shenme* ‘draw what’), *shenme* calls for a categorial specification of the type of, or content of, the “action” shown by the verb head. In other words, the *shenme* that works to seek a categorial specification is not a form that inquires about an “entity” itself, but rather functions as a form to inquire about the type of the “entity” or about its contents. In this sense, *shenme* is not a typical noun like Japanese *NANI*, but rather has the characteristics of an attribute (word) and could be more appropriately called an “interrogative attribute (word)”.

Another difference in the function of *shenme* for category specification is that, unlike *NANI*, it can be used to select one from a set of two or more possible candidates. There is no problem with (32), a Chinese sentence using *shenme* and corresponding to (24).

- (32) *Pijiu he weishiji, ni xihuan shenme?*  
 beer and whiskey you like what  
 ‘Of beer and whiskey, which do you prefer?’

One other big difference between *shenme* and *NANI* is that *shenme* is not used to inquire about number. Numeric expressions in Chinese also take the form of a “number + classifier” compound, but the interrogative that is used in the number position is *ji*, which has a demonstrative-like function, and not *shenme*. In Chinese, particularization of a number is done, not through specification or naming, but through indexing.

## 5 Regarding *dore* and *dotti* – with comparison to *neige*

Lastly, we consider *dore* and *dotti* and the Chinese word corresponding to them, *neige*. In terms of their morphology and their syntactic functions these interrogatives match the characteristics of demonstratives in each language. That is, they are “interrogative demonstratives”. Moreover, in terms of their semantic function, they are forms that call for a deictic selection from either the physical or the contextual environment; they do not have the function of calling for a description of the attributes of an object as do *dare* and *NANI* and *shei* and *shenme*. We will refer here to the function of these interrogatives as their “list (indexing) function” and will describe below the functional characteristics of the three interrogatives.

### 5.1 The list function of *dore*

The list (indexing) function of *dore* is to seek from the hearer the deictic selection of the relevant object from a set of three or more candidate choices provided in the physical speech environment or from discourse with regard to a variety of “entities” other than “persons”, “locations”, or “times” in order to identify an unknown or uncertain element. Examples include the earlier (20) and (21) and (33), below.

- (33) *Basu ka takusii ka tikitetu ka, dore de iku no ga*  
 bus or taxi or subway or which by go that NOM  
*itiban benri desu ka?*  
 most convenient COP Q

‘Which would be the most convenient to take – bus, taxi, or subway?’

When a similar selection is sought for “persons”, “locations”, or “times”, *dore* is not used and *dare* ‘who’, *doko* ‘where’, and *itsu* ‘when’, respectively, are used instead. However, there is one use in which *dore* can be used for “persons”. That use is, as discussed in Section 3.2, when it is used in a copular sentence, namely, when *dore* is used as the subject of a copular sentence calling for the deictic indication of a person present in the speech location (cf (9)). Leaving this exceptional use aside, *dore* cannot be used in an interrogative sentence inquiring about a “person”. The interrogative sentence (34) does inquire about a person present in the speech location, but, because it is a sentence with a verb phrase predicate denoting an action and not a copular sentence like example (9), the *dore* in this example is clearly unnatural.

- (34) *Asoko ni rikkoohosya ga go-nin iru desyoo?*  
 over.there LOC candidate NOM 5-CLF be.PRS COP.PRES  
*Anata wa {#dore / dare} ni toohyoo suru?*  
 you TOP { which / who} DAT cast.ballot do  
 ‘There are 5 candidates over there, aren’t there? Which/who will you vote for?’

Concerning a person used as an argument in a verbal sentence, that is, a person who can be taken as a participant in the action or event, since the semantic feature [humanity] is prominent, *dare* is felt to be appropriate. On the other hand, when talking about a person who is not a participant in an action or event, one who can be taken simply as an object to be selected deictically, such a person can be treated in the same manner as a non-human “entity” – in other words, when the difference between [+humanity] and [-humanity] is neutralized –*dore* can be used. The difference in acceptability between (9) and (34) can be understood in this way.

The list (indexing) function of *dore* is similar to the category specification function carried by *nani* in that it applies to all kinds of “entities”, except “persons”, “locations”, and “times”. However, in that *dore* can also function in cases like (20) and (21) given earlier to ask about a specific individual, it is different from *nani*. *Nani* is a form that seeks a specification at the conceptual level, that is, a type specification, and can not be used to seek specification of a particular individual.

Also, in terms of being appropriate for choices from among three or more possible candidates, the list (indexical) function of *dore* is similar to the individual specification function of *dare*. However, in the case of *dore*, it is necessary for the possible candidates to be clearly specified within the context and this is different from the case of *dare*. If, as in examples (35) and (36), an inquiry is made with the possible candidates having absolutely no context, (35) with *dare* is acceptable as an appropriate utterance but (36) with *dore* is not. *Dore* requires more strongly than *dare* that the possible candidates be clearly specified.

- (35) *Asu no paatii, anata, dare to issyo ni iku no?*  
 tomorrow GEN party you who COM together ADV go Q  
 ‘Who will you go to the party tomorrow with?’
- (36) #*Asu no paatii, anata, dore o kite iku no?*  
 tomorrow GEN party you which ACC wear.GER go Q  
 ‘Which are you going to wear to the party?’

*Dore* cannot be used without the possible candidates being clearly specified in some way either constructionally or discoursally. Put another way, provided the possible candidates are clearly specified, *dore* can be used without regard as to whether the target is a particular individual (cf (20) and (21)) or a conceptual category (cf (33)).

## 5.2 The list (indexing) function of *dotti*

The list (indexing) function of *dotti* is to seek from the hearer the deictic selection of the relevant object from a set of two candidate choices provided in the physical speech environment or from discourse with regard to a variety of “entities” other than “times” in order to identify an unknown or uncertain element, as in examples (8) and (24).

One difference between *dotti* and *dore* is that, whereas *dore* is a form that calls for the choice of one alternative from among three or more possible candidates, *dotti* is a form that exclusively calls for a choice between two alternatives. Another important difference is that, whereas *dore* generally cannot be used for inquiries about “persons”, “locations”, or “times”, *dotti*, as seen in (8) and (37), can be used for inquiries about “persons” and for inquiries about “locations”. Uniquely, it is only for inquiries about “times” that neither can be used; for inquiries about “times”, only *itu* can be used, as shown in (38).

- (37) *Natu no ryokoo wa, Tookyoo ka Kyooto ka dotti ni iki-tai?*  
 summer GEN trip TOP Tokyo Q Kyoto Q which to go-DESI  
 ‘For a summer trip, which would you rather go to, Tokyo or Kyoto?’

- (38) *Hatigatu ni taiin sita no? Kugatu ni*  
 August in hospital.discharge do.PST Q September in  
*taiin sita no? {\*dotti ni / itu} taiin*  
 hospital.discharge do.PST Q {which in / when} hospital.discharge  
*sita no?*  
 do.PST Q  
 ‘Did you get out of the hospital in August? In September? When did you get out?’

As can be seen from (8), (24), and (37), *dotti* can be used with regard to “persons” and “locations” in the same way as for other “entities”. In other words, the opposition between “person” or “not-person” or between “location” or “not-location” is neutralized. The speech act of calling for a choice between two alternatives typically just calls for an immediate choice of one of two, one or the other, of two alternatives of the same type. Specification of the semantic features of the choices, such as [humanity] or [location] is unnecessary and can be ignored.

Like *dore*, *dotti* also requires clear specification of the possible alternatives either constructionally or discursively. In addition, as long as the choices are clearly specified, *dotti* can be used for any “entity” other than “time” without regard to whether the target is a particular individual or a conceptual category.

### 5.3 The list (indexing) function of *neige*

In Chinese, the interrogative that seeks a physical or contextual deictic choice from among clearly specified choices is *neige*. *Neige* can be used for inquiries asking for a selection from among two or more candidates. The functions that are split between *dore* and *dotti* in Japanese are carried singlehandedly by the one word *neige* in Chinese. As previously stated, *shei* ‘who’ and *shenme* ‘what’ in Chinese can also be used for inquiries asking for a choice of one from two or more choices. There is no interrogative in Chinese like *dotti* that is exclusively reserved for binary choices.

Unlike *dotti*, *neige* cannot be used freely for inquiries about “persons”. Like *dore*, in a situation that calls for deictic identification of a target existing in the physical speech environment, *neige* cannot generally be used to refer to a “person” except when used as the subject of a copular sentence (cf (9)). *Neige* also cannot be used for inquiries about “locations” or “times”. That is, *neige* inquires about “entities” other than “person”, “location”, and “time” and has this characteristic in common with *shenme* used seeking a categorial specification. However, whereas *shenme* seeks a conceptual category specification, the difference in referentiality between individual and category is irrelevant to *neige*, which can be used to seek a deictic selection from among all elements proffered by the speech environment or by context.

## 6 Conclusion and prospects for future research

This chapter has considered the semantics of *dare* ‘who’, *NANI* ‘what’, *dore* ‘which (of three or more)’, and *dotti* ‘which (of two)’ from a functional point of view and compared them with Chinese *shei* ‘who’, *shenme* ‘what’, and *neige* ‘which’. The results of this consideration are summarized below with emphasis on the functional similarities and differences among the several forms.

The functions carried by these interrogatives can be broadly divided into three types, to wit, a type calling for a description, a type calling for a specification, and a type calling for an indication.

First, the description seeking function is carried by *dare* and *NANI* in Japanese and by *shei* and *shenme* in Chinese. *Dare* and *shei* call for a description of the attributes of an individual person and *NANI* and *shenme* call for a description of the attributes of various “entities”.

Next, the specification seeking function is also carried by *dare* and *NANI* and by *shei* and *shenme*. *Dare* and *shei* posit a fixed group of possible candidates regarding an unknown or uncertain “person” among the participants making up a proposition and call for specification of the relevant person, while *NANI* and *shenme* seek the specification of a category concerning some unknown or unspecified “entity” other

than a “person”, “location”, or “time” from among the participants in a proposition. In that *dare* and *shei* typically call for the specification of an individual while *NANI* and *shenme* call for the specification of a category, they differ in referentiality. Also, while *dare* and *shei* call for selection from within a closed group, *NANI* and *shenme* call for specification from an open “entity” set. Furthermore, due to the openness of the targets of *NANI* and *shenme* and the conceptual abstractness of the answer sought, the usage of both has been broadened to include use as an internal element in a compound word and as a component of a verb phrase corresponding to an interrogative verb. In the case of *NANI*, the form has even gained a use inquiring about “number” through compounding with a classifier.

There is one difference between the two languages concerning the specification seeking function: Japanese *dare* and *NANI* are only appropriate when the number of possible choices is three or more and are not suitable for choices between two alternatives, but Chinese *shei* and *shenme* are compatible with binary choices. Also, *NANI* is syntactically highly independent, assuming a nominal function so the term interrogative noun is appropriate, but Chinese *shenme* has comparatively low syntactic independence and is typically used as a complement to a head.

Finally, the deictic selection seeking function is carried by Japanese *dore* and *dotti* and by Chinese *neige*. *Dore* and *neige* both call for either a physical deictic indication or a contextual indication of the relevant object from a limited set of “things” provided in the speech environment or from a limited set of “entities” clearly delimited through linguistic expression as the object of an inquiry about an “entity” other than “persons”, “locations”, or “times”. *Dore* and *neige* can be used to inquire about any such target proffered by the speech environment or by context without regard to whether it is individual or conceptual.

Here too, there is a difference between the two languages in the deictic selection seeking function in that, whereas *dore* is only compatible with choices from among three or more candidates, *neige* is compatible with choices from among any number of candidates, including binary choices. In short, Japanese *dare*, *NANI*, and *dore* are all incompatible with a binary choice inquiry and that gap is singlehandedly filled by *dotti*.

*Dotti* is used exclusively for binary inquiries and calls for either a physical deictic indication or a contextual indication of the relevant target from the binary choice provided of various “entities” other than “times”. There is no corresponding interrogative in Chinese. *Dotti*, like *dore*, can be used to inquire about any target proffered by the speech environment or by context without regard to whether it is individual or conceptual and, in addition, “persons” and “locations” are included within the “entities” that can be targets of the inquiry. That is, compared to the other interrogatives, limits on the categories that can become the target of inquiries with *dotti* are the most relaxed.

As is clear from the summary above, the contrasts among the seven interrogatives taken up in this chapter cannot be dealt with simply as a contrast between “persons” and “things”. A number of functional or semantic factors overreaching the differences

between the languages, such as description or specification or deictic indication, individual or categorial, “person” or “entity” other than “person”, or binary or multi-way choice, all come into play and determine the oppositions among the various forms.

When people turn their attention to some sort of unknown or uncertain “entity”, at least two different levels of domain can be thought of as search domains for the relevant target for that “entity”. One is the domain of the physical speech environment or, as an extension of that domain, the discourse domain, and the other is the speaker’s own knowledge domain or that of the other participant in the conversation, namely that of the listener. Within the latter domain, because the system of human knowledge is constructed human-centrally, “persons” are generally stored as individual units and, to the extent possible, are typically remembered with names attached, such as *Taroo* ‘Taro’ or *Yamada-san* ‘Mr/Ms Yamada’. In contrast, non-“person” entities, other than “locations” and “times”, are generally stored in categorial units and are typically remembered with class names, such as *ringo* ‘apple’ or *takusii* ‘taxi’. It is normally difficult to think of a situation in which a *ringo* or *takusii* would be remembered as an individual unit with its respective proper name attached.

The picture presented here of the functional distribution of interrogatives in the two languages can thus be thought of as reflecting differences in the level of the domains with which the targets of inquiry are affiliated and of the way the targets are stored within those domains. That is, *dore*, *dotti*, and *neige* are oriented toward the domain of the physical speech environment or of the discourse environment, *dare* and *shei* are oriented to the knowledge domain of “person”, and *NANI* and *shenme* are oriented toward the knowledge domain of “entity”, excluding the domains of “person”, “location”, and “time”. The fact that these kinds of oppositions in form and function can be observed straddling the two languages suggests that the functional viewpoint and analysis upon which this chapter is based is one that has a certain effective generality for comparative research.

As stated in the opening paragraph, in a great number of the languages of the world, the interrogatives used to inquire about “persons” are exclusively used for “persons”, but the interrogatives used for inquiries about “things” are also used for inquiries about various “entities” other than “things”. Clarifying what types of factors are involved in the existence of these sorts of functional oppositions is a topic for future comparative research and for research in linguistic typology, but the approach considered in this chapter can be expected to contribute to their elucidation.

This chapter has only dealt with forms inquiring about “persons” and “things” but to capture the entirety of interrogative categories in Japanese and Chinese systematically will require consideration of other interrogative forms. In particular, problems concerning “location” and “time”, which cannot become the query targets of most of the interrogatives dealt with in this chapter, are important and are our immediate top research priority.



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Tasaku Tsunoda

# **19 Inalienable possession in Japanese, English, and Warrongo**

## **1 Introduction**

Possession is generally classified into two types: alienable and inalienable possession. This semantic classification is reflected in the grammar of many languages. Linguistic expressions of inalienable possession often exhibit morphosyntactic features that are not observed in those of alienable possession.

The distinction between alienable and inalienable possession can be regarded as constituting not a clear-cut dichotomy but a cline: the Possession Cline. Various types of possessors can be placed on the continuum, ranging from inalienable to alienable possession. Furthermore, it is useful to divide inalienable possessors into two types: “everyone”-type and “not-everyone”-type. The Possession Cline and the division of inalienable possessors are manifested in various linguistic expressions

## **2 History of research**

Expressions of possession seem to have received relatively little attention in research into Japanese. Previous studies include Suzuki (1968), Kuno (1973: 73–95), Martin (1975: 193–198), Takahashi (1975), Takahashi and Yaku (1984), Hinds (1986: 134–142), Tsunoda (1992, 1995, 2009: 125–176), Niida (1999), Nishiyama (2003), Koya (2013), and Nishikawa (2013). Among them, Tsunoda (1995, 2009 [1991]) is probably the most comprehensive, dealing with almost all the expressions of possession in Japanese. It also proposes the Possession Cline and the division of inalienable possessors.

## **3 Characterizations of possession, alienable possession, and inalienable possession**

Possession is not easy to characterize. Nonetheless, Seiler (1983: 3) states as follows: “Semantically, the domain of possession can be defined as bio-cultural. It is the relationship between a human being and his kinsmen, his body parts, his material belongings, his cultural and intellectual products. In a more extended view, it is the relationship between parts and whole of an organism.” The present work adopts

Seiler's broad notion of possession. In most of the issues discussed below, the possessor is human, not (non-human) animate or inanimate. The concept of possession seems most useful for humans, less useful for animates, and least useful for inanimates.

Similarly, alienable and inalienable possession are not easy to characterize. Dixon (1980: 293) characterizes them as follows: alienable possession – “something that is not an intrinsic part of the possessor”, and inalienable possession – “something being an inseparable part of something else.” Nichols (1988: 568) characterizes them as follows: “inalienable possession is inborn, inherent, not conferred by purchase; alienable possession is, roughly, ownership, socially and economically conferred.” In what follows, we shall follow Dixon's and Nichols' characterizations.

## 4 Cline of inalienable and alienable possession

There are works that regard the distinction between inalienable and alienable possession not as a clear-cut dichotomy, but as a hierarchy, a continuum, or a cline. For example, on the basis of some crosslinguistic data, Haiman (1985: 136) presents a hierarchy that can be shown as follows: kinsmen and/or body parts > artefacts.

Nichols (1988: 572) proposes the following hierarchy.

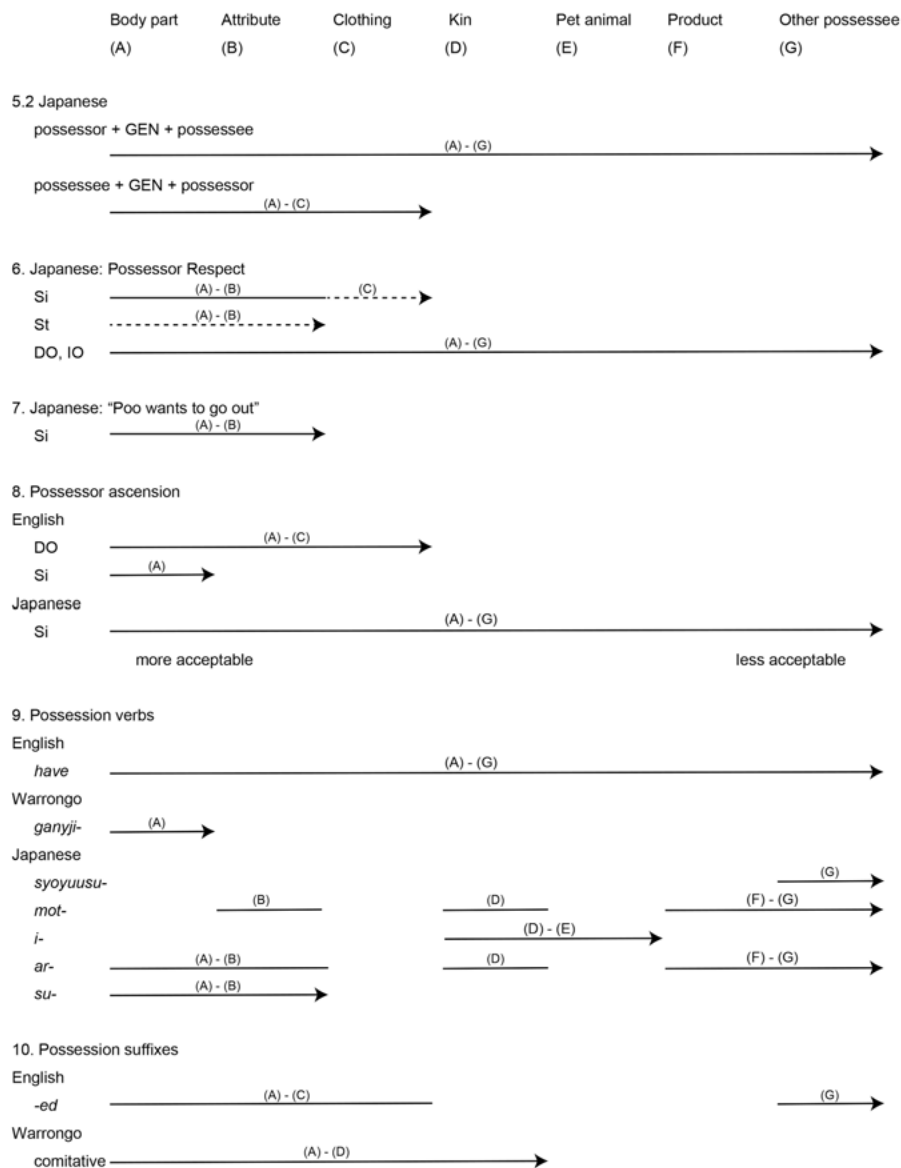
- (1) Nichols' (1988: 572) hierarchy  
 Kin terms and/or body parts > Part-whole and/or spatial relations >  
 Culturally basic possessed items (e.g. arrows, domestic animals)

Tsunoda (1995: 576, 2009: 127) proposes “the Possession Cline”.

- (2) Possession Cline (Tsunoda (1995: 576, 2009: 127)):  
 Body part > Inherent attribute > Clothing > Kin > Pet animal  
 > Product > Other possessee

This cline “represents the degree of closeness/attachedness – physical and/or psychological – between the possessor and the possessee” (Tsunoda 1995: 576).

Comments on the individual possessee types follow. [1] “Body part” refers to the body, body parts, and also excreta, such as sweat and faeces. [2] “Inherent attribute” (hereafter “Attribute”) concerns inherent attributes, such as propensity, weight, height, size, shape, state of health, temperature, and blood pressure. Names are not inborn, but socially conferred. Nonetheless, in languages such as Warrongo (Australia) (Tsunoda 2011: 653), the word for ‘name’ behaves like inalienable nouns such as body part nouns. In view of this, names can be viewed as belonging to “Attribute”. [3] “Clothing” means clothes, spectacles, shoes, etc. that are worn and



**Figure 1:** Manifestations of the Possession Cline

attached to the body. According to usual classifications, they are alienable possesseees. Nonetheless, they are physically (and probably psychologically as well) very close to the possessor, and they are almost body parts. When they are not worn (for example, when they are kept in a wardrobe), they belong to “Other possessee”. [4] “Kin” comprises consanguineous kinsfolk (e.g. parents, grandparents, siblings) and other

kinsfolk (e.g. spouse, in-laws, adopted children). Consanguineous kinsfolk have a Janus-like nature. They resemble typical inalienable possessors in that they are inborn and inherent. They also resemble usual alienable possessors in that (physically at least) they are not attached to the possessor's body. [5] "Pet animal" refers to pet animals, pet birds, domestic animals, etc. [6] "Product" includes, for example, a work that a craftsman made (not one that he bought), and a book that an author wrote (not a copy of a book that he/she bought). [7] All other possessors belong to "Other possessor".

This chapter will look at the expressions of possession in Japanese, together with those in English and Warrongo, mainly in terms of the Possession Cline. Most of the phenomena discussed manifest the Possession Cline, and this is shown in Figure 1.

Hinds (1986: 138) states: "There is no syntactic distinction between alienable and inalienable possession in Japanese." However, this is not exactly correct. As Figure 1 shows, the Possession Cline, which includes alienable and inalienable possession, is reflected in various syntactic phenomena of Japanese. Numbers refer to the sections and sub-sections below in which each topic is taken up.

## 5 Japanese genitive case

### 5.1 Range of uses

The genitive case of Japanese is generally expressed by the enclitic *no*. The possessor may be human, animate, or inanimate. The possessee may be alienable or inalienable. Suzuki (1968) shows that the genitive case *no* has a very wide range of uses and he classifies and exemplifies them as shown below. (The English translations of the types and of the examples are mine.)

[1] Specification of an attribute. (i) An attribute of an object/thing. *tokei no hani* [clock GEN hand] 'clock hands'. (ii) Use. *kudamono no naihu* [fruit GEN knife] 'a fruit knife'. (iii) A characteristic part. *nagai asi no tukue* [long leg GEN desk] 'a desk with long legs'. (iv) A characteristic aspect. *sankaku no omusubi* [triangle GEN rice.ball] 'a triangular rice ball'. (v) Object/patient of an act. *zidoosya no untensyu* [car GEN driver] 'a driver of a car'. (vi) Quantity/amount. *hitotu no saikoro* [one GEN dice] 'one die'.

[2] Specification of belonging, e.g. *Yamada-san no kyookasyo* [Yamada-Mr. GEN textbook] 'Mr. Yamada's textbook'.

[3] Specification of relationship. *Morisita no niisan* [Morishita GEN elder.brother] 'Morishita's elder brother'.

[4] Specification of an actor, object, etc. (i) An aspect of an actor, object, etc. *omusubi no katati* [rice.ball GEN shape] 'the shape of a rice ball'. (ii) The actor, etc. of an action, existence, etc. *Momoko no kisyoo* [Momoko GEN getting.up.from.bed] 'Momoko's getting up from bed [in the morning]'. (*Momoko* is a woman's name.)

(iii) Specification of a producer. *Sooseki no syoosetu* [novel GEN Soseki] ‘a novel written by Natsume Soseki’.

[5] Specification of an object/patient. (i) The patient of an action. *sakana no yakikata* [fish GEN grilling-method] ‘how to grill fish’. (ii) The theme of a product/work. *uma no buronzu-zoo* [horse GEN bronze-statue] ‘a bronze statue of a horse’.

[6] Specification of the content. *kyoohu no keikaku* [horror GEN plan] ‘a horrifying plan’.

[7] Specification of a situation. (i) Place. *kudamono-kago no mikan* [fruit-basket GEN mandarin] ‘a mandarin in a fruit basket’. (ii) Time. *sitigatu no daisan-doyoobi* [July GEN third-Saturday] ‘the third Saturday of July’.

There are other classifications of the uses of the genitive case *no*, e.g. Nishiyama (2003: 16) and Nishikawa (2013).

## 5.2 “Possessor + GEN + possessee” and “possessee + GEN + possessor”

The genitive *no* can be used in the following two patterns: [1] possessor + GEN + possessee, and [2] possessee + GEN + possessor. Pattern [1] is what may be considered a typical pattern for expressions of possession. It is no doubt very common crosslinguistically. It is not known whether pattern [2] is common or uncommon.

[1] Possessor + GEN + possessee. This pattern is acceptable with all the possessee types on the Possession Cline. Examples involving a human possessor follow. (*Hanako* is a woman’s name.) (i) Body part. *Hanako no me* ‘Hanako’s eyes’. (ii) Attribute. *Hanako no taizyuu* ‘Hanako’s weight’. (iii) Clothing. *Hanako no boosi* ‘Hanako’s hat’. (iv) Kin. *Hanako no otto* ‘Hanako’s husband’. (v) Pet animal. *Hanako no inu* ‘Hanako’s dog’. (vi) Product. *Hanako no tyosyo* ‘Hanako’s publication’. (vii) Other possessee. *Hanako no ie* ‘Hanako’s house’.

[2] Possessee + GEN + possessor. This pattern describes a characteristic of a human/animate/inanimate (Suzuki 1968: 28, Takahashi 1975: 11, Kageyama 1980: 13, Tsunoda (1995: 609, 2009: 154), Koya 2013: 132), to be precise, a characteristic that helps to distinguish that human/animate/inanimate from others. This pattern is acceptable from “Body part” to “Clothing”. With the other possessee types, it does not sound natural out of context, but it may be acceptable when used in a suitable context (Tsunoda (1995: 609–614, 2009: 154–155)); such examples are marked with a question mark. Examples involving a human possessor follow. Most of them are cited from Tsunoda (1995, 2009 [1991]). (i) Body part. *hige no otoko* [beard GEN man] ‘a man with a beard’. (ii) Attribute. *yoi seikaku no otoko* [good nature GEN man] ‘a man with a good nature’. (iii) Clothing. *nagai sukaato no onna* [long skirt GEN girl] ‘a woman with a long skirt on’ (Takahashi 1975: 11). (iv) Kin. *?ookii kazoku no otoko* [big family GEN man], intended meaning: ‘a man who has a big family’. (v) Pet animal. *?siroi inu no otoko* [white dog GEN man], intended meaning: ‘a man

who has a white dog'. (vi) Product. *?takusanno tyosyo no gakusya* [many writing GEN scholar], intended meaning: 'a scholar who has many publications'. (vii) Other possessee. *?ookii koozyoo no otoko* [large factory GEN man], intended meaning: 'a man who owns a large factory'.

## 6 Possessor Respect in Japanese

### 6.1 Introductory notes

The Possession Cline (see (2)) was conceived on the basis of honorific expressions observed in the media reports on the last days of the previous emperor, from the latter half of 1988 to the beginning of 1989. (For this reason, the examples given in 6.2 to 6.4 contain reference to the emperor.) Japanese honorifics are discussed, e.g. in Kuno (1973: 18–22), Martin (1975: 331–354), Harada (1976), Ōishi (1983), and Minami (1987). In accordance with Harada (1976: 502), the types of honorifics can be shown as follows. (Harada's terms are indicated in parentheses.)

#### (3) *Japanese honorifics*

##### (a) Respect honorifics (Propositional honorifics)

##### (a-1) Subject respect honorifics (Subject honorifics)

##### (a-2) Non-subject respect honorifics (Object honorifics)

##### (b) Polite honorifics (Performative honorifics)

(a) and (b) are not mutually exclusive, while (a-1) and (a-2) are. A verbal suffix for (a) precedes one for (b). (For example, in (9), the suffix *-are* (for (a-1)) precedes the suffix *-mas* (for (b)).) The honorific prefixes *o-* and *go-* are often used in all the categories listed above.

Polite honorifics are used to make the sentence sound polite. A more literal (and no doubt unnatural) translation of (9), for example, would be 'I politely state [to you] that the EMPEROR's temperature has returned to its previous state'.

Respect honorifics are used to denote respect to (the referent of) an argument or an adjunct. Tsunoda (1995: 571) coined the term "respectee" to refer to the person to whom respect is directed.

Subject respect honorifics contain an element such as the following in the predicate verb (Harada 1976: 504): *o*-ROOT-INFINITIVE *ni nar-*, or ROOT-(*r*)*are-*. See (5). *Ni* is the dative postposition, and the verb *nar-* literally means 'become', e.g. (10). *-(r)are* indicates subject respect.

Compare (4) and (5) (both adapted from Kuno 1973: 20). (5) is an instance of subject honorifics. (In translating respect honorifics, I shall avoid clumsy English sentences and simply indicate the respectee with capital letters.)



- (4) *Tanaka-san ga Suzuki-san o mat-ta.*  
 Tanaka-Mr. NOM Suzuki-Mr. ACC wait-PST  
 ‘Mr. Tanaka waited for Mr. Suzuki.’
- (5) *Tanaka-san ga Suzuki-san o o-mat-i ni*  
 Tanaka-Mr. NOM Suzuki-Mr. ACC HON-wait-INF DAT  
*nat-ta* (or *mat-are-ta*).  
 RESP-PST ( wait-RESP-PST)  
 ‘MR. TANAKA waited for Mr. Suzuki.’

Non-subject respect honorifics contain the element *o*-ROOT-INFINITIVE *su-* in the predicate verb (Harada 1976: 572). (The verb *su-* literally means ‘do’, e.g. (57).) Compare (4) with (6) (adapted from Kuno 1973: 20). In (6), the respectee is the object (Mr. Suzuki).

- (6) *Tanaka-san ga Suzuki-san o o-mat-i si-ta.*  
 Tanaka-Mr. NOM Suzuki-Mr. ACC HON-wait-INF RESP-PST  
 ‘Mr. Tanaka waited for MR. SUZUKI.’

Furthermore, respect honorifics can be used to show respect to a possessor that is marked by the genitive postposition *no* (Harada 1976: 526, 529). Consider (7) (adapted from Harada 1976: 502).

- (7) *Tanaka-san ga Suzuki-san no o-nimotu o*  
 Tanaka-Mr. NOM Suzuki-Mr. GEN HON-baggage ACC  
*o-mot-i si-ta*  
 HON-carry-INF RESP-PST  
 ‘Mr. Tanaka carried MR. SUZUKI’s baggage.’

In (7), the respectee is Mr. Suzuki (the possessor in the genitive), not Mr. Suzuki’s baggage (the possessee). Tsunoda (1995: 573) coined the term “Possessor Respect” to refer to those respect honorifics in which the respectee is the possessor in the genitive. The entire genitive phrase may be ellipsed, being contextually given, e.g. (8).

Examples of Possessor Respect follow.

## 6.2 Possessor Respect involving the intransitive subject

My own intuition as a native speaker of Japanese, and also a survey that I conducted involving more than 100 native speakers of Japanese, indicate that – when the respectee involves the intransitive subject (Si) – the acceptability of Possessor Respect reflects the Possession Cline. Specifically, Possessor Respect is highly acceptable

with “Body part”, e.g. (8), less but still fairly acceptable with “Attribute”, e.g. (9), and barely acceptable with “Clothing”, e.g. (10), and so on. It is unacceptable with “Other possessee”, which lies at the low end of the Possession Cline; cf. (11). (These examples are cited from Tsunoda 1995: 574, 575, 582, 2009: 125, 126, 131).

- (8) *O-karada ga yowat-te or-are-ru.*  
 HON-body NOM weaken-GER be-RESP-NONPST  
 ‘The [EMPEROR’s] body has become weak.’
- (9) *Heika no go-taion wa motono zyootai*  
 emperor GEN HON-temperature TOP previous state  
*ni modor-are-mas-i-ta.*  
 DAT return-RESP-POL-INF-PST  
 ‘The EMPEROR’s temperature has returned to its previous state.’
- (10) ?*Heika no o-boosi ga sukosi*  
 emperor GEN HON-hat NOM a.little  
*huruku nar-are-mas-i-ta.*  
 old become-RESP-POL-INF-PST  
 ‘The EMPEROR’s hat has become a little old.’
- (11) \**Heika no syoyuuti ga taihuu de*  
 emperor GEN property NOM typhoon LOC  
*mizubitashi ni nar-are-mas-i-ta.*  
 flooding DAT become-RESP-POL-INF-PST  
 ‘The EMPEROR’s land was flooded in a typhoon.’

### 6.3 Possessor Respect involving the transitive subject

When the transitive subject (St) is involved, Possessor Respect is at best barely acceptable with “Body part”, e.g. (12), and even less acceptable with “Attribute”, e.g. (13). This is despite the fact that “Body part” and “Attribute” occupy the highest positions on the Possession Cline. Possessor Respect is unacceptable with the other possessee types. (The examples below are cited from Tsunoda 1995: 586–587, 2009: 134).

- (12) ?*Tennooheika no odayakana me wa*  
 emperor GEN gentle eye TOP  
*itumo kokumin no kokoro o yasurakani*  
 always people GEN mind ACC peaceful  
*si-te irassya-i-mas-i-ta (or or-are-mas-i-ta).*  
 make-GER be.RESP-INF-POL-INF-PST ( be-RESP-POL-INF-PST)  
 ‘The EMPEROR’s gentle eyes always made the people’s mind peaceful.’
- (13) ?*Heika no go-byooki ga kokumin ni*  
 emperor GEN HON-illness NOM people DAT  
*ookina syoogeki o o-atae ni*  
 big shock ACC HON-give.INF DAT  
*nat-ta (or atae-rare-ta).*  
 RESP-PST ( give-RESP-PST)  
 ‘The EMPEROR’s illness gave the people a big shock.’

## 6.4 Possessor Respect involving the object

When the object is involved, Possessor Respect is highly acceptable throughout the Possession Cline – even with “Other possessee”, which occupies the lowest position. This applies irrespective of whether the object is the direct object (DO) or the indirect object (IO). Examples involving the DO include (14) (Body part) and (15) (Other possessee). Examples involving the IO include (16) (Body part) and (17) (Other possessee). ((15) is adapted from Harada (1976: 526). The other three examples are cited from Tsunoda (1995: 585, 586, 2009: 135).)

Direct object

- (14) *Zizyo ga tennooheika no te o*  
 lady.in.waiting NOM emperor GEN hand ACC  
*o-tor-i si-ta.*  
 HON-take-INF RESP-PST  
 ‘A lady in waiting took the EMPEROR’s hand.’
- (15) *Tanaka-san wa heika no o-nimotu o*  
 Tanaka-Mr. TOP emperor GEN HON-baggage ACC  
*o-mot-i si-ta.*  
 HON-carry-INF RESP-PST  
 ‘Mr. Tanaka carried the EMPEROR’s baggage.’

Indirect object

- (16) *Zizyo ga tennooheika no te ni*  
 lady.in.waiting NOM emperor GEN hand DAT  
*o-boosi o o-watas-i si-ta.*  
 HON-hat ACC HON-hand-INF RESP-PST  
 ‘A lady in waiting handed a hat to the EMPEROR’s hand.’

- (17) *Tanaka-san wa tennooheika no go-yootei ni*  
 Tanaka-Mr. TOP emperor GEN HON-villa DAT  
*sono nimotu o o-okur-i si-ta.*  
 that baggage ACC HON-send-INF RESP-PST  
 ‘Mr. Tanaka sent that bag to the EMPEROR’s villa.’

As seen above, Possessor Respect involving the subject (either the Si or the St) becomes less acceptable as we move from the high end of the Possession Cline towards the low end. Its acceptability shows a cline. In contrast, Possessor Respect involving the object (either the DO or the IO) is equally highly acceptable throughout the Possession Cline. In this respect, its acceptability does not show a cline.

The degrees of acceptability of Possessor Respect involving the Si, the St, the DO, and the IO are shown in Figure 1. (A solid line means “highly acceptable”, a broken line “barely acceptable”, and no line “unacceptable”.) This can also be shown as follows.

- (18) *DO, IO > Si > St*

In all the examples of Possessor Respect given above, the possessor is the emperor. Nonetheless, Possessor Respect can be used about other people, including common people (Tsunoda 2009: 126). It is unlikely to be used about animates and inanimates.

## 7 Japanese: “Poo wants to go out”

Consider the following sentence (which was mentioned by Kazuko Inoue in one of her lectures, probably in the late 1960s). It had been apparently uttered by a little child. The noun *unti* ‘faeces’ is used by children and also by adults when talking to children. It may be translated with the English word *poo*.

- (19) *Unti ga de-ta-i.*  
 poo NOM emerge-DESI-NONPST  
 LT: ‘Poo wants to go out.’  
 FT: ‘I want to do poo.’

The literal meaning of (19) is shown in the LT. What (19) really means is shown in the FT. That is, (19) denotes the intention of the possessor, and not of the possessee. In my view, the acceptability of sentences such as (19) is conditioned by two factors: grammatical relations and the Possession Cline. Regarding grammatical relations, such sentences are acceptable only when the Si is involved, and it is unacceptable with the St, the DO, and the IO. This can be shown as follows.

(20) *Si > St, DO, IO*

When the Si is involved, sentences such as (19) are often – though not always – acceptable with “Body part”, e.g. (19) (faeces), and “Attribute”, e.g. (21) (height). However, they are unacceptable with the other possessee types.

(21) *Se ga taka-ku nar-i-ta-i.*  
 height NOM high-ADVL become-INF-DESI-NONPST  
 LT: ‘Height wants to be tall.’  
 FT: ‘I want to be tall.’

## 8 Possessor ascension

### 8.1 Introductory notes

The acceptability of possessor ascension appears to be conditioned by two factors: [1] grammatical relations and [2] the Possession Cline.

[1] Grammatical relations. In English (Tsunoda 2009: 140–141), possession ascension seems to be most acceptable with the DO, followed by the Si, and unacceptable with the St. This can be shown as in (22). Blackfoot of North America, Gumbaingar [sic] of Australia (Fox 1981: 324–325), and Chamorro of the South Pacific (Durie 1987: 389) seem to allow possessor ascension for the DO only. This can be shown as in (23). In Haya of East Africa (Hyman 1977: 209), Lardil of Australia (Fox 1981: 327–328), and Acehnese of Indonesia (Durie 1987: 374, 389), possessor ascension seems to be possible with the DO and the Si, but impossible with the St. This can be shown as in (24). Japanese has a phenomenon similar to possessor ascension. It is acceptable with the Si, but unacceptable with the St and the DO (and also the IO). This can be shown as in (25).

(22) *DO > Si > St (English)*

(23) *DO > Si, St*

(24) *DO, Si > St*

(25) *Si > DO, St (Japanese)*

The DO occupies the highest position in (22) to (24), while the Si occupies the highest position in (25). In each pattern, the St occupies the lowest position.

[2] Possession Cline seems to be manifested in the acceptability of possessor ascension. Indeed, such a view is implicitly expressed by Hyman (1977: 101, 104–107, 112, 113), Fox (1981: 326, 328), Blake (1984: 451), and Durie (1987: 388). For example, regarding Haya, Hyman (1977: 101, 104–105, 107) notes that possessor ascension is acceptable with body parts and clothing attached to the body, but impossible with, for example, a stick. A stick belongs to “Other possessee”, the lowest position on the Possession Cline.

## 8.2 Possessor ascension in English

The acceptability of possessor ascension in English appears to be as shown in (22).

[1] DO. Roughly speaking, possessor ascension is acceptable with “Body part” (see (26) and (27)), “Attribute”, and “Clothing” (see (28) and (29)). It is unacceptable with the other possessee types (see (30) and (31) (“Other possessee”).) ((27) and (31) are cited from Fox (1981: 326), and the other four examples from Tsunoda (1991: 133, 1995: 592, 593).)

Body part

(26) *I hit his leg.*

(27) *I hit him on the leg.*

Clothing

(28) *I grabbed his sleeve.*

(29) *I grabbed him by the sleeve.*

Other possessee

(30) *I hit his wine bottle.*

(31) *\*I hit him on the wine bottle.*

[2] Si. Possessor ascension is attested, apparently only in a small number of examples. It seems to be limited to “Body part”. Examples cited from Okutsu (1996: 268):

(32) *His face became very red.*

(33) *He became very red in the face.*

## 8.3 Possessor ascension in Japanese

Japanese has a phenomenon similar to possessor ascension (8.1). It is acceptable with the Si, but unacceptable with the St and the DO, and also the IO. See (25).

[1] Si. Possessor ascension is acceptable throughout the Possession Cline. Its acceptability shows a cline, being most acceptable at the high end, and least acceptable at the low end. Thus, it sounds most natural with “Body part”; see (34) and (35). It sounds less natural, but still acceptable with “Attribute”. It is even less natural, but still somewhat acceptable with “Kin”; see (36) and (37). Towards the low end, it sounds less natural, but it is still not entirely unacceptable; see (38) and (39) (Other possessee). ((34) is cited from Mikami (1960: 12). (36) and (37) are cited from Kuno (1973: 69). The translations are Kuno’s. The other three examples are cited from Tsunoda (1995: 593, 594, 2009: 141, 142).)

Body part

- (34) *Zoo no hana ga naga-i.*  
 elephant GEN nose NOM long-NONPST  
 ‘The elephant’s nose is long’ or ‘It is the elephant’s nose that is long.’
- (35) *Zoo ga hana ga naga-i.*  
 elephant NOM nose NOM long-NONPST  
 ‘It is the elephant whose nose that is long.’

Kin

- (36) *John no o-toosan ga sin-da.*  
 John GEN HON-father NOM die-PST  
 ‘John’s father died’ or ‘It is John’s father who died.’
- (37) *John ga o-toosan ga sin-da.*  
 John NOM HON-father NOM die-PST  
 ‘It is John whose father died.’

Other possessee

- (38) *Taroo no bessoo ga tubure-ta.*  
 Taroo GEN resort.house NOM collapse-PST  
 ‘Taroo’s resort house collapsed’ or ‘It is Taroo’s resort house that collapsed.’
- (39) ?*Taroo ga bessoo ga tubure-ta.*  
 Taroo NOM resort.house NOM collapse-PST  
 ‘It is Taroo whose resort house collapsed.’

[2] St, DO, and IO. Possessor ascension is unacceptable with the St, the DO, and the IO – even when it involves “Body part”, which occupies the highest position on the Possession Cline. Examples (Tsunoda 1991: 135, 1995: 595) involving the St follow.

- (40) *Taroo no me ga Hanako no sugata o torae-ta.*  
 Taroo GEN eye NOM Hanako GEN sight ACC catch-PST  
 ‘Taroo’s eyes caught sight of Hanako.’
- (41) \**Taroo ga me ga Hanako no sugata o torae-ta.*  
 Taroo NOM eye NOM Hanako GEN sight ACC catch-PST

## 9 Possession verbs

### 9.1 Introductory notes

There are verbs that can express possession. Their uses may be conditioned by factors such as (i) the type of the possessor (e.g. human vs. animate vs. inanimate) and (ii) the type of the possessee (cf. the Possession Cline). We shall examine possession verbs of English and Warrongo (9.2), and Japanese (9.3), mainly in terms of the Possession Cline.

### 9.2 Possession verbs of English and Warrongo

[1] English. The most representative possession verb of English is no doubt *have*. It is acceptable with all the possessee types (Tsunoda 1995: 599, 2009: 150). Due to space considerations, no examples are given.

[2] Warrongo. There is no verb that solely expresses possession. The transitive verb *ganyji-* generally means ‘carry, take, bring’. In a small number of examples, it expresses possession. The possessee is “Body part”. (See Tsunoda (2011: 664–665).) An example cited from Tsunoda (2011: 268):

- (42) (*The late Mr. Alf Palmer, the main consultant for my study of Warrongo, seemed to believe that there is an inverse correlation between a man’s size and the size of his penis. He made the following comment.*)
- jangarago-nggo ganyji-n gagabara-Ø.*  
 small-ERG carry-NF big-ACC  
 ‘Small [men] have a big [penis].’
- gagabara-nggo ganyji-n jangarago-Ø.*  
 big-ERG carry-NF small-ACC  
 ‘Big [men] have a small [penis].’

### 9.3 Possession verbs of Japanese

#### 9.3.1 Introductory notes

Japanese has at least five verbs that can express possession: *mot-* ‘have’, *ar-* ‘exist’, *i-* ‘exist’, *syoyuu-* ‘possess’, and *su-* ‘do’. They belong to different styles. Also, their



uses are conditioned by the possessee types on the Possession Cline, although their uses do not necessarily reflect a cline. None of them can be used for all possessee types. Details are given in Tsunoda (1995: 599–609, 2009: 145–154).

### 9.3.2 *Syoyuusu*- ‘possess’

*Syoyuusu*- ‘possess’ is formal and bookish. It takes the NOM+ACC case frame (if no NP is elliptical and if no case postposition is replaced, for example, with the topic postposition *wa*). When used finitely, it generally occurs in the progressive form, i.e. the gerundive (*-te/-de*) plus *i*- ‘be, exist’. (When used non-finitely, for example, in an adnominal clause, it can occur in a non-progressive form). *Syoyuusu*- ‘possess’ is confined to “Other possessee” and is unacceptable with other types of possessee. An example, cited from Hinds (1986: 138):

- (43) *Watasi wa kabu o syoyuusi-te i-ru.*  
 I TOP stock ACC possess-GER be-NONPST  
 ‘I possess stock.’

### 9.3.3 *Mot*- ‘have’

*Mot*- ‘have’ is style-neutral. Regarding the case frame and aspect, it shares the properties of *syoyuusu*- ‘possess’. It has a discontinuous distribution in terms of the Possession Cline. It is generally unacceptable with “Body part”. It is acceptable with “Attribute”, e.g. (44) (Tsunoda 1995: 605), “Kin”, e.g. (45) (Tsunoda 1995: 606), “Product”, e.g. (46) (Tsunoda 1995: 606, 2009: 150), and “Other possessee”, e.g. (47) (Hinds 1986: 138). It is unacceptable with “Clothing” and “Pet animal”.

- (44) *Taroo wa marena sainoo o mot-te i-ru.*  
 Taroo TOP rare talent ACC have-GER be-NONPST  
 ‘Taroo has a rare talent.’
- (45) *Taroo wa rippana oya o mot-te i-ru.*  
 Taroo TOP respectable parent ACC have-GER be-NONPST  
 ‘Taroo has respectable parents.’
- (46) *Yamada-sensei wa ookuno tyosyo o mot-te i-ru.*  
 Yamada-professor TOP many writing ACC have-GER be-NONPST  
 ‘Professor Yamada has many publications.’

- (47) *Watasi wa kuruma o mot-te i-ru.*  
 I TOP car ACC have-GER be-NONPST  
 ‘I have a car.’

### 9.3.4 *I-* ‘exist’ and *ar-* ‘exist’

Both *i-* ‘exist’ and *ar-* ‘exist’ can indicate existence. The entity that exists (hereafter “exister”) is marked by *ga* ‘NOM’. The location is indicated by *ni* ‘DAT’ (if it is not ellipsed). With *i-* ‘exist’, the “exister” may be human or non-human animate, but it cannot be inanimate. See (48). With *ar-* ‘exist’, the “exister” is inanimate, but not human or animate. See (49). That is, these two verbs show a complementary distribution in this respect. See Table 1 (Tsunoda 2009: 151).

- (48) *Niwa ni kodomo / inu / \*isu ga i-ru.*  
 yard DAT child / dog / chair NOM exist-NONPST  
 ‘There is a child / dog / \*chair in the yard.’
- (49) *Niwa ni \*kodomo / \*inu / isu / ga ar-u.*  
 yard DAT child / dog / chair NOM exist-NONPST  
 ‘There is a \*child / \*dog / chair in the yard.’

**Table 1:** *I-* ‘exist’ and *ar-* ‘exist’ for existence and possession

	Existence: exister			Possession: possessee		
	Human	Animate	Inanimate	Human	Animate	Inanimate
<i>i-</i>	+	+	–	+	+	–
<i>ar-</i>	–	–	+	+	–	+

Furthermore, these two verbs can express possession. The possessee is marked by *ga* ‘NOM’. The possessor is marked by *ni* ‘DAT’ (if it is not ellipsed). *Ni* is often followed by *wa* ‘TOP’, and also it is often replaced with *wa* ‘TOP’. Roughly speaking, each of these two verbs shows the same restriction in terms of humanness/animateness/inanimateness of the “exister” and the “possessee”. However, there is one exception: *ar-* ‘exist’ can be used for human possessee (Takahashi 1975: 3, Niida 1999: 236). See Table 1. (This provides evidence for distinguishing between *ar-* for existence and *ar-* for possession (Takahashi 1975: 3).) We now look at each of these two verbs as used for expressions of possession.

[1] *I-* ‘exist’ for possession. As just noted, *i-* ‘exist’ for possession can be used for human and non-human animate possessee, but not for inanimate possessee. That is, in terms of the Possession Cline, it can only be used with “Kin”, e.g. (50) (Niida 1999: 246), and “Pet animal”, e.g. (51). It cannot be used for any other possessee type.

- (50) *Kare ni wa tuma ga i-ru.*  
 he DAT TOP wife NOM exist-NONPST  
 ‘He has a wife.’
- (51) *Kare ni petto no neko ga i-ru.*  
 he DAT pet GEN cat NOM exist-NONPST  
 ‘He has a pet cat.’

[2] *Ar-* ‘exist’ for possession. *Ar-* ‘exist’ for possession can be used for inanimate possessees.

- (52) *Hanako ni zaisan ga ar-u.*  
 Hanako DAT fortune NOM exist-NONPST  
 ‘Hanako has a fortune.’

As noted above, *ar-* ‘exist’ for possession can also be used for human possessees (Takahashi 1975: 3, Niida 1999: 236). (Note that *ar-* for existence cannot be used for humans.) Takahashi and Niida do not mention this explicitly, but in my intuition *ar-* ‘exist’ for possession sounds most natural with kin nouns. See (53) (Niida 1999: 236).

- (53) *Kare ni wa tuma ga ar-u.*  
 he DAT TOP wife NOM exist-NONPST  
 ‘He has a wife.’

Niida (1999) notes that the use of *ar-* ‘exist’ for the possession of humans is on the decline, and *i-* ‘exist’ for possession tends to be used instead, as in (50).

In terms of the Possession Cline, *ar-* ‘exist’ for possession can be used with “Body part”, e.g. (54), “Attribute”, e.g. (55), “Kin”, e.g. (53), “Product”, e.g. (56), and “Other possessee”, e.g. (52). But it cannot be used with “Clothing” or “Pet animal”.

- (54) *Akio wa nikibi ga ar-u.*  
 Akio TOP pimple NOM exist-NONPST  
 ‘Akio has pimples.’
- (55) *Hanako ni wa sainoo ga ar-u.*  
 Hanako DAT TOP ability/talent NOM exist-NONPST  
 ‘Hanako is talented.’
- (56) *Yamada-sensei ni wa ookuno tyosyo ga ar-u.*  
 Yamada-professor DAT TOP many writing NOM exist-NONPST  
 ‘Professor Yamada has many publications.’

### 9.3.5 *Su-* ‘do’ for possession

The verb *su-* literally means ‘do’, e.g. (57), but it can also express possession. It takes the NOM+ACC case frame (if no NP is ellipsed and if no case postposition is obliterated), irrespective of whether it has its literal meaning or it expresses possession.

- (57) *Kodomo-tati ga yakyuu o su-ru* (or *si-te i-ru*).  
 child-PL NOM baseball ACC do-NONPST ( do-GER be-NONPST)  
 ‘Children play (or, are playing) baseball.’

It was suggested, though not always explicitly, that the use of *su-* ‘do’ for possession is limited to inalienable possession (Takahashi 1975: 11, Kageyama 1980: 12–13). In my view, it is indeed confined to “Body part”, e.g. (58) (Kageyama 1980: 12–13), and “Attribute”, e.g. (59) (adapted from Kageyama 1980: 12); they are typical inalienable possessors. *Su-* ‘do’ for possession is unacceptable with other possessee types.

- (58) *Naomi wa aoi me o si-te i-ru*.  
 Naomi TOP blue eye ACC do-GER be-NONPST  
 ‘Naomi has blue eyes.’

- (59) *Titi wa kurai hyoozyoo o si-te i-ta*.  
 father TOP dark expression ACC do-GER be-PST  
 ‘[My] father had a grim expression [on his face].’

The use of *su-* ‘do’ for possession is peculiar, for three reasons. (i) Its literal meaning ‘do’ does not imply anything like possession. (ii) There is an aspectual restriction on its use to describe possession. That is, when used finitely, it must occur in the progressive form; see (58) and (59). (When used non-finitely this restriction does not apply.) In contrast, this restriction does not apply when *su-* is used in its literal sense. See (57). (There is no tense restriction irrespective of whether *su-* has its literal meaning ‘do’ or describes possession.) (iii) The possessee noun must be accompanied by a modifier. Otherwise these sentences are ungrammatical (Kageyama 1980: 12). For example, if *aoi* ‘blue’ is deleted from (58), the resultant sentence is nonsensical.

The possessor is generally human. But it can be animate, e.g. (60) (Body part), or inanimate, e.g. (61) (Attribute). Again, *su-* ‘do’ for possession is limited to “Body part” (or “Part”) and “Attribute”.

- (60) *Kono inu wa nagai hana o si-te i-ru*.  
 this dog TOP long ACC do-GER be-NONPST  
 ‘This dog has a long nose.’

- (61) *Kono iwa wa henna katati o si-te i-ru.*  
 this rock TOP strange shape ACC do-GER be-NONPST  
 ‘This rock has a strange shape.’

## 10 Possession suffixes

We shall look at *-ed* adjectives of English (10.1) and the comitative case suffix of Warrongo (10.2).

### 10.1 English: *-ed* adjectives

Adjectives of English with the suffix *-ed* express possession. Roughly speaking, their acceptability correlates with the Possession Cline, but there are a very small number of exceptions (Tsunoda 1995: 614–615, 2009: 155–158). Specifically, *-ed* adjectives are acceptable with “Body part”, “Attribute”, and “Clothing”. They appear to be unacceptable with “Kin”, “Pet animal”, and “Product”. With “Other possessee”, generally they seem to be unacceptable, but there are a very small number of acceptable examples. Examples follow. [1] Body part. *a bearded man* (Hudson 1975: 70), *a grey-haired man*, *a red-headed boy* (Hirtle 1969: 27), *a blue-eyed boy* (Hirtle 1969: 20). [2] Attribute. *a talented girl* (Tsunoda 1995: 614, 2009: 155), *a good-natured man* (Hirtle 1969: 21), *an absent-minded professor* (Tsunoda 1995: 614). [3] Clothing. *a helmeted motorcyclist* (Hudson 1975: 71), *a uniformed commissioner* (Hudson 1975: 71), *a white-coated attendant* (Hudson 1975: 71), *a white-hatted cabman* (adapted from Hirtle 1969: 30). [4] Kin. *\*a wifed man* (Hudson 1975: 71). [5] Pet animal and Product: no example available. [6] Other possessee. *\*a carred man* (Hudson 1975: 71), *a many-carred family* (Hirtle 1969: 31), *moneyed men* (Hirtle 1969: 21), *a landed proprietor* (Hirtle 1969: 29), *an estated country gentleman* (Hirtle 1969: 29).

### 10.2 Warrongo: comitative case

Warrongo has the comitative case suffix ‘with, having’ (Tsunoda 1995: 616–617, 2009: 157, 2011: 210–222, 643–644). Roughly speaking, its allomorphs are *-ji* following a consonant and *-yi* following a vowel. It is acceptable with “Body part”, “Attribute”, “Clothing”, and “Kin”. With the other possessee types, no suitable example is available. Examples follow. [1] Body part. *jalbar-ji* [beard-COM] ‘with/having a beard’. [2] Attribute. *morran-ji* [sickness-COM] ‘sick’, [3] Clothing. *gambi-yi* [clothes-COM] ‘with/having clothes on’. [4] Kin. *jolbon-ji* [spouse-COM] ‘married’.

## 11 “Everyone”-type possessors and “not everyone”-type possessors

### 11.1 Introductory notes

Possessors can be divided into two types: “everyone”-type and “not everyone”-type. This classification is particularly relevant to “Body part” and “Attribute”, which are typical inalienable possessors.

- (a) “Everyone”-type possessors
  - (a-1) Body part: head, eyes, hair, arms, feet, etc.
  - (a-2) Attribute: weight, height, personality, nature, etc.
- (b) “Not everyone”-type possessors
  - (b-1) “Not everyone”-type proper
    - (b-1-1) Body part: beard, pimples, etc.
    - (b-1-2) Attribute: talent, elegance, grace, illness, etc.
  - (b-2) “Everyone”-type with a qualification
    - (b-2-1) Body part: blue eyes, grey hair, etc.
    - (b-2-2) Attribute: tall height, good nature, etc.

“Everyone”-type possessors are those which people usually or normally have. In contrast, “not everyone”-type possessors are those which people do not necessarily have; there may be many people who do not have them. For example, eyes are “everyone”-type possessors, while blue eyes are “not everyone”-type possessors. People normally have eyes, but not everyone has blue eyes.

The classification of “everyone”-type and “not everyone”-type possessors was originally conceived of on the basis of the data from Warrongo (Tsunoda 1974: 145–147, 1976: 220). Examples of this distinction from Warrongo, Japanese, and English are given below.

### 11.2 Warrongo

The comitative case of Warrongo (Tsunoda 2011: 214–217) can be used with both “everyone”-type and “not everyone”-type possessors. Regarding “everyone”-type possessors, Tsunoda (1976: 220) notes as follows: “It is quite normal that a person should have a particular body part or secretion. Therefore, it is not necessary to say that a person has such a part or secretion”. When the comitative case is used with an “everyone”-type possessor, it indicates that something is unusual, abnormal, or wrong with that possessor. In contrast, when it is used with a “not everyone”-type possessor, it merely describes possession. It does not say that something is unusual/abnormal/wrong with that possessor. Examples of the two types follow.

[1] “Everyone”-type possessors. (i) *bolo-yi* [belly-COM] ‘satiated with food, having diarrhoea, wanting to defecate, pregnant’. (ii) *mambo-yi* [back-COM] ‘having a sore back’. (iii) *jina-yi* [foot-COM] ‘having sore or tired feet’. (iv) *jinggo-yi* [body.hair-COM] ‘hairy’ (i.e. having more hair than usual or the average). (v) *gona-yi* [faeces-COM] (rarely) ‘having faeces inside’, (generally) ‘having diarrhoea, wanting to defecate’. (vi) *walngga-yi* [breath-COM] ‘something is wrong/unusual with the breath’, i.e. ‘short-winded, tired’, and also ‘in love, eager, keen, fond’.

[2] “Not everyone”-type possessors. (i) *jalbar-ji* [beard-COM] ‘having a beard’. (ii) *jiji-yi* [sore-COM] ‘having a sore’. (iii) *birngga-yi* [grey.hair-COM] ‘an old person’. (iv) *goymbirra-yi* [tribal.cicatrices-COM] ‘initiated man’ (only initiated men had tribal cicatrices, on the chest). (v) *morran-ji* [sickness, illness-COM] ‘sick, ill’.

## 11.3 Japanese

### 11.3.1 *Ar*- ‘exist’

As seen in 9.3.4-[2], *ar*- ‘exist’ can describe possession of “Body part” and “Attribute”, among others. The distinction between “everyone”-type and “not everyone”-type possessors is relevant here. Sentences with an “everyone”-type possessor have a special meaning: ‘above the average’ or ‘X-er than the average’. In contrast, those with a “not everyone”-type possessor do not have a special meaning; they have a literal meaning. Examples of the two types follow.

[1] “Not everyone”-type possessors. (i) Body part. *nikibi* ‘pimple in (54). (ii) Attribute. *sainoo* ‘ability, talent’ in (55).

[2] “Everyone”-type possessors. Except for (65), the examples below are cited from Tsunoda (1995: 608, 2009: 152, 153).

Body part

(62) (*I recorded the following sentence from a radio broadcast of a baseball match in the mid-1980s.*)

*Hukumoto-sensyu wa asi ga ar-i-mas-u.*

Hukumoto-athlete TOP foot/leg NOM exist-INF-POL-NONPST

‘Hukumoto is a fast runner (he runs faster than the average).’

(63) *Taroo wa atama ga ar-u.*

Taroo TOP head NOM exist-NONPST

‘Taroo is brainy (that is, more intelligent than the average).’

(64) *Ano daiku wa ude ga ar-u.*

that carpenter TOP arm NOM exist-NONPST

‘That carpenter is skilled (that is, more skilled than the average).’

## Attribute

- (65) *Ano rikisi wa sintyoo ga ar-u.*  
 that sumo.wrestler TOP height NOM exist-NONPST  
 ‘That sumo wrestler is tall (that is, taller than the average).’
- (66) *Ano rikisi wa taizyuu ga ar-u.*  
 that sumo.wrestler TOP weight NOM exist-NONPST  
 ‘That sumo wrestler is heavy (that is, heavier than the average).’
- (67) *Taroo wa netu ar-u.*  
 Taroo TOP temperature NOM exist-NONPST  
 ‘Taroo has a temperature (higher than the norm).’

It should be added that sentences such as (62) to (67) are not possible with all “everyone”-type possessors.

## 11.3.2 Possessee + GEN + possessor

As seen in 5.2-[2], the pattern “possessee + GEN + possessor” is acceptable with “Body part” and “Attribute” (and also “Clothing”). Generally, this pattern is unacceptable with “everyone”-type possessors (but there are exceptions; see below) and acceptable with “not everyone”-type possessors. Examples are cited from Tsunoda (1995: 610–611, 618, 621, 2009: 154–155, 159–161). Generally, the pattern “possessee + GEN + possessor” of Japanese and *-ed* adjectives of English (10.1) have similar distributions of acceptability in terms of the distinction between the “everyone”-type and the “not everyone”-type. Where feasible, a Japanese example is accompanied by an English translation that involves an *-ed* adjective.

- (a) “Everyone”-type possessors
- (a-1) Body part. (i) *\*kami no syoozyo* [hair GEN girl] \*‘a haired girl’.  
 (ii) *\*me no syoozyo* [eye GEN girl] \*‘an eyed girl’. (iii) *\*atama no syoonen*  
 [head GEN boy] \*‘a headed boy’.
- (a-2) Attribute. (i) *\*seisitu no otoko* [nature GEN man] \*‘a natured man’.  
 (ii) *\*hyoozyoo no otoko* [expression GEN man] \*‘an expressed man’.
- (b) “Not everyone”-type possessors
- (b-1) “Not everyone”-type proper
- (b-1-1) Body part. (i) *hige no otoko* [beard GEN man] ‘a bearded man’.  
 (ii) *nikibi no syoonen* [pimple GEN boy] ‘a pimples boy’. (iii) *hokuro no otoko* [mole GEN man] ‘a man with a mole’.
- (b-1-2) Attribute. (i) *hage no otoko* [baldness GEN man] ‘a bald man’.



(b-2) “Everyone”-type with a qualification

(b-2-1) Body part. (i) *nagai kami no syoozyo* [long hair GEN girl] ‘a long-haired girl’. (ii) *aoi me no syoozyo* [blue eye GEN girl] ‘a blue-eyed girl’. (iii) *sira-ga no otoko* [white-hair GEN man] ‘a grey-haired man’.

(b-2-2) Attribute. (i) *yoi seisitu no otoko* [good nature GEN man] ‘a good-natured man’. (ii) *kurai hyoozyoo no otoko* [dark expression GEN man] ‘a man with a gloomy expression’.

As seen above, the pattern “possessee + GEN + possessor” is generally unacceptable with “everyone”-type possessors, but there are exceptions (Tsunoda 1995: 621, 2009: 161, 164). Examples follow.

[1] Body part. (i) *hana no Sirano* [nose GEN Cyrano] ‘Big-nosed Cyrano de Bergerac’. (ii) *medama no Mattyan* [eye GEN Mattyan] ‘Big-eyed Mattyan’. ((ii) is the nickname of an actor whose name is Matsunosuke Onoe.)

[2] Attribute. (i) *taizyuu no Konisiki* [weight GEN Konishiki] ‘Heavy-weighted Konishiki’. (ii) *sintyoo no Akebono* [height GEN Akebono] ‘Tall-heighted Akebono’. (“Konishiki” and “Akebono” are the ring names of two sumo wrestlers (from Hawaii).)

Examples such as those given in [1] and [2] above involve “everyone”-type possessors, and yet they are acceptable. They differ from unacceptable instances such as those given in (a-1) above (e.g. *\*kami no syoozyo* [hair GEN girl] ‘\*a haired girl’) in that they refer to specific individuals (Tsunoda 1995: 627). (I owe Taro Kageyama (p.c.) this observation.) These instances have the special meaning of “above average”.

## 11.4 English

[1] Adjectives with *-ed* are acceptable with “not everyone”-type possessors; see the examples listed in 10.1-[1], -[2]. They are unacceptable with “everyone”-type possessors. Compare *a blue-eyed boy* with *\*an eyed boy* (Hirtle 1969: 20); and *a red-headed boy* with *\*a headed-boy* (Hirtle 1969: 28). Note that “eyes” and “head” are “everyone”-type possessors, while “blue eyes” and “red head” are “not-everyone”-type possessors.

As mentioned in 11.3.2, on the whole, the pattern “possessee + GEN + possessor” of Japanese and *-ed* adjectives of English have very similar distributions; they are acceptable with “not everyone”-type possessors, but they are unacceptable with “everyone”-type possessors. However, there is one subtle difference. The pattern “possessee + GEN + possessor” of Japanese includes examples such as those listed in 11.3.2-[1], -[2] (e.g. *hana no Sirano* [nose GEN Cyrano] ‘Big-nosed Cyrano de Bergerac’). In contrast, their parallel expressions with an *-ed* adjective are unacceptable: *\*Nosed Cyrano*, *\*Eyed Mattyan*, *\*Weighted Koniski*, and *\*Heighted Akenonbo*.

[2] Adjectives with *-y* appear to be acceptable with “everyone”-type only (Tsunoda 1995: 624–625, 2009: 161–162). Examples follow. (i) Body parts. *brainy*, *nosey*, *throaty*,

*breathy, busty, bosomy, chesty, hearty, gutsy, handy, leggy, hairy, meaty, bloody, bony, sweaty, smelly.* (ii) Attribute. *weighty, healthy.*

These adjectives do not just express possession. They have some kind of special meaning. For example, *brainy* means ‘intelligent, clever’, and *weighty* means ‘heavy’.

-y adjectives and -ed adjectives differ in the following four respects. (i) -y adjectives appear to be acceptable with “everyone”-type possessors only, while -ed adjectives are acceptable with “not everyone”-type possessors only. (ii) -y adjectives have a special meaning, but -ed adjectives do not. (iii) -y adjectives have expressions such as the following (Tsunoda 2009: 162): *Bony Tony, Handy Mandy, Leggy Jenny, Hairy Mary*. These expressions refer to specific individuals (like Japanese examples listed in 11.3.2-[1], -[2], e.g. *hana no Sirano* [nose GEN Cyrano] ‘Big-nosed Cyrano de Bergerac’). In contrast, -ed adjectives referring to specific individuals are unacceptable; cf. *\*Nosed Cyrano, \*Eyed Mattyan, \*Weighted Koniski, and \*Heighted Akenonbo*. (iv) -ed adjectives may or may not contain an adjective in them, e.g. *blue-eyed* and *bearded*. In contrast, -y adjectives do not contain an adjective in them. These two types of adjectives appear to exhibit a complementary distribution in terms of (i), (ii), and (iii).

[3] *Have*. Consider the following examples (Tsunoda 1995: 609, 2009: 153). Body part: (68), (69). Attribute: (70).

(68) *He has an eye for paintings.*

(69) *He has an ear for music.*

(70) *He has a temperature.*

The possessors are of the “everyone”-type, and they are not accompanied by an adjective. Note that in (68) and (69) the singular forms – *an eye* and *an ear* – are used. These examples describe a function or ability of the body part concerned, and, a function or ability better than the average. (70) means that the temperature is higher than the norm. All of these three examples do not just express possession. They have a special meaning: ‘X-er than the average/norm’.

[4] *With the* + “everyone”-type possessor. Consider the following examples (Tsunoda 1995: 622, 2009: 162).

(71) *the girl with the eyes*  
‘the girl who has the most beautiful eyes in the group’

(72) *the man with the belly*  
‘the man who has the biggest belly in the group’

(73) *the man with the foot/feet*  
‘the fastest man in the group’

The possessors are of the “everyone”-type (“Body part”), and they are not accompanied by an adjective. The article has to be the definite article, not the indefinite article. (In (73), the possessee noun may be in the singular form *foot* or the plural form *feet*.) These examples all mean ‘the person who has the X-est in the group’. That is, they have a special meaning.

Table 2 summarizes what we saw in [1] to [4]. In addition, it contains two examples that were not given above: *have blue eyes* and *have a beard*. For each category, one example is given. *-ed* adjectives on the one hand and *-y* adjectives and the expression *with the* on the other appear to exhibit a complementary distribution (Tsunoda 1995: 624). The latter two expressions are limited to “everyone”-type possessors. All the expressions used for “everyone”-type possessors have a special meaning.

**Table 2:** English

“Everyone”-type possessee		
<i>-ed</i>	<i>*an eyed boy</i>	<i>*Nosed Cyrano</i>
<i>-y</i>	<i>brainy</i>	<i>Bony Tony</i>
	special meaning	special meaning
<i>Have</i>	<i>have an eye for X</i>	...
	special meaning	
<i>With the</i>	<i>the girl with the eyes</i>	...
	special meaning	
“Not everyone”-type possessee		
<i>-ed</i>	<i>a blue-eyed boy</i>	<i>a bearded man</i>
<i>-y</i>	...	...
<i>Have</i>	<i>have blue eyes</i>	<i>have a beard</i>
<i>With the</i>	...	...

## 12 Negation of possession

### 12.1 Introductory notes

There are expressions that negate possession (Tsunoda 1992, 2009: 165–167). Here again, the distinction between “everyone”-type and “not everyone”-type possessors is relevant. Sentences involving a “not everyone”-type possessee do not have any special meaning. They simply negate possession. In contrast, those involving an “everyone”-type possessee may simply negate possession. But they may also have a special meaning.

## 12.2 Japanese

Japanese has a few methods for negating possession, e.g. the adjective *na-* ‘non-existent’ and the nominal prefix *mu-* ‘without X, X-less’ (Tsunoda 1992, 2009: 165–166). We shall look at *na-* ‘nonexistent’. (Most of the examples given below are cited or adapted from Tsunoda (1992: 155, 156, 2009: 165, 166).)

[1] “Not everyone”-type. Examples include (74) (Body part) and (75) (Attribute). They simply negate possession. Compare (74) with (54), and (75) with (55).

- (74) *Akio wa nikibi ga na-i.*  
 Akio TOP pimple NOM nonexistent-NONPST  
 LT: ‘As for Akio, pimples are nonexistent.’  
 FT: ‘Akio has no pimples.’

- (75) *Hanako wa sainoo ga na-i.*  
 Hanako TOP ability/talent NOM nonexistent-NONPST  
 ‘Hanako is not talented.’

[2] “Everyone”-type

[2-1] Body part. Consider:

- (76) *Ano otoko wa atama ga na-i.*  
 that man TOP head NOM nonexistent-NONPST  
 LT: ‘As for that man, the head is nonexistent.’  
 (a) Non-special meaning: ‘That man does not have the head.’  
 (b) Special meaning: ‘That man is not brainy (that is, he is less intelligent than the average).’

As the translations show, (76) has two meaning. It can have the meaning (a) when, for example, a police officer describes a beheaded corpse. However, it can also have the meaning (b): ‘below the average’. This is in contrast with parallel expressions that involve the verb *ar-* ‘exist’; they have the meaning of ‘above the average’. Compare (76) with (63). Additional examples follow. Compare (77) with (62), and (78) with (64).

- (77) *Yamakura-sensyu wa asi ga na-i.*  
 Yamakura-athlete TOP foot/leg NOM nonexistent-NONPST  
 LT: ‘As for Yamakura, feet/legs are nonexistent.’  
 FT: ‘Yamakura is a slow runner (that is, slower than the average).’

(*Yamakura* is the name of a baseball player. It was widely known that he was a slow runner.)

- (78) *Ano daiku wa ude ga na-i.*  
 that carpenter TOP arm NOM nonexistent-NONPST  
 LT: 'As for that carpenter, arms are nonexistent.'  
 FT: 'That carpenter is not skilled (that is, less skilled than the average).'

[2-2] Attribute. A non-special meaning is possible.

- (79) *Kono akanboo wa mada namae ga na-i.*  
 this baby TOP still/yet name NOM nonexistent-NONPST  
 'This baby does not have a name yet.'

However, most of the examples have the special meaning of 'below the average'.

- (80) *Ano rikisi wa sintyoo ga na-i.*  
 that sumo.wrestler TOP height NOM nonexistent-NONPST  
 'That sumo wrestler is not tall (that is, he is shorter than the average).'

- (81) *Ano rikisi wa taizyuu ga na-i.*  
 that sumo.wrestler TOP weight NOM exist-NONPST  
 'That sumo wrestler is not heavy (that is, he is lighter than the average).'

Compare (80) with (65); and (81) with (66).

It should be added that sentences such as (76) (with a special meaning), (77), (78), (80) and (81) are not acceptable with all "everyone"-type possessors.

## 12.3 English

English provides instances that are parallel to some of the Japanese examples given in 12.2.

[1] The verb *have*. The following examples (Tsunoda 1992: 155, 2009: 166) contain "Body part". Compare (82) with the Japanese example (76); see the special meaning.

- (82) *Bill doesn't have a head for figures*  
 (83) *He has no brain.*  
 (84) *He has no heart.*

[2] The suffix *-less*. The following examples (Tsunoda 1992: 159, 2009: 166) have a special meaning. (i) Body part. *a faceless man, headless, eyeless* ('blind'), *heartless, bloodless*. (ii) Attribute. *mindless, thoughtless, nameless*.

## 13 Conclusion and prospects for future research

The present chapter examined various expressions of possession (including their negation) in Japanese, English, and Warrongo, and showed that the acceptability of these expressions may be conditioned by factors such as (i) the Possession Cline, (ii) the division between “everyone”-type and “not everyone”-type possessors, and perhaps rather unexpectedly (iii) grammatical relations. It showed that expressions of inalienable possession often exhibit morphosyntactic features that are not observed in those of alienable possession.

Issues remain that are in need of investigation, one of which is the following. As noted in 11.3.1, sentences such as (62) to (67) are not possible with all “everyone”-type possessors. For example, it is possible to compose a Japanese sentence that literally means ‘Taroo has a nose’, but that sentence is nonsensical; it does not mean ‘Taroo has a good sense of smell (better than the average)’. At this stage of investigation, no factor is known that may condition the acceptability of “everyone”-type possessors in such expressions of Japanese. Also, my cursory enquiry into about ten languages suggests that languages differ as to what “everyone”-type possessor nouns are acceptable in such expressions. It is important to examine, regarding the acceptability of such expressions, whether (i) there is any conditioning factor within individual languages, and (ii) there is any crosslinguistic tendency.

## Additional abbreviations

FT – free translation; LT – literal translation; NF – non-future; Si – intransitive subject; St – transitive subject.

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### **III Aspect, modality, and prediction**



Kazuyuki Kiryu

## 20 Continuous aspects in Japanese, Newar and Meche

### 1 Introduction

It is well-known that the *-te iru* form of a verb exhibits either an ongoing process reading or a resultant state reading, depending on the situation aspect (or lexical aspect) of the verb. Compared to English, it is not simply valid to regard the generalized aspectual meaning of the *-te iru* form as progressive or imperfective, although it is similar to the English Progressive construction *be V-ing* in that they both allow ongoing process readings, typically with activities and accomplishments in the sense of Vendler (1957), and that they do not take stative verbs even for an ongoing state reading. However, the *-te iru* forms of achievements, for instance *sin-u* ‘to die’, are never understood as progressives (or preliminary stage readings), unlike the English Progressive (e.g. *be dying*), which in turn does not allow a resultative reading, unlike the Japanese counterpart (e.g. *sin-de iru* ‘be dead’). Furthermore, the Japanese *-te iru* form also allows “perfect” readings, which is not possible with the English Progressive and is expressed by a different construction, *have V-en*.

The purpose of this chapter is twofold. First, I will argue that the generalized aspectual meaning of the *-te iru* form is a “continuous aspect” gram. Since the seminal work of Kindaichi (1950), there has been a lot of discussion of particularized senses of the form, such as *shinkō-sō* ‘progressive aspect’, *kekka-sō* ‘resultative aspect’, and so on, and later it has been considered to be *keizoku-sō* ‘continuous’ aspect, as in Kudo (1995), which is one of widely accepted views in Japanese linguistic circles.<sup>1</sup> The term *keizoku-sō* ‘continuous aspect’, however, has been used casually without being well defined. The point of my argument is to present as a valid aspectual grammatical marker (or “gram” in the sense of Bybee, Perkins and Pagliuca 1994) “continuous aspect gram”, which typically represents ongoing processes of non-instantaneous verbs, resultatives of telic verbs, and perfects.

Although Comrie (1976) sets up “continuous” as a subtype of imperfectives in contrast to habitual, and further divides it into progressive and non-progressive, By-

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<sup>1</sup> There are several proposals for the aspectual distinction between the simplex forms (*suru* and *sita*) and the *-te iru* forms (*si-te iru/ita*). Kudo (1995) considers that the simplex forms are *kansei sō* (perfective aspect) while the *-te iru* forms are *keizoku sō* (continuous aspect). Shirai (1999) takes the opposition as being between perfective (*suru*) and imperfective (*si-te iru*). Inoue (2001) assumes the opposition in terms of stativity, claiming that the *-te iru* constructions “stativize” dynamic verbs, hence considering the simplex forms as non-statives and the *-te iru* forms as statives. Nishiyama (2006) consider the form compositionally, arguing that *-te* is an imperfective marker and that *iru* is a stativizer.

bee, Perkins and Pagliuca (1994) claim that continuous is not a typologically valid gram, unlike progressive and habitual, which are found across languages. My second argument is to claim “continuous” is a typologically valid aspectual category through an examination of the aspectual meanings that the *-te iru* form represents and further verify its typological status through a contrastive study between Japanese and two Tibeto-Burman languages, Newar and Meche. This contrastive study will also shed light on the semantic network among the aspectual meanings expressed by the continuous aspect markers, which in turn will give a typological perspective. The semantic network is best described by the semantic map model (Haspelmath 2003).

The chapter is organized as follows. Section 2 will describe the range of meanings expressed by the Japanese *-te iru* form and discuss what senses “continuous aspect” typically covers and how this range differs from progressive and imperfective. Section 3 and 4 will argue that continuous is also a valid aspectual category in describing similar aspectual markers in Newar and Meche. Based on the data presented in the preceding two sections, Section 5 will discuss the similarity and differences among the three languages. Section 6 will present a semantic map analysis of the meanings expressed by the aspectual grams of the four languages to capture a typological overview. Section 7 is a conclusion.

## 2 The aspectual meanings of Japanese *-te iru*

The Japanese auxiliary verb *iru* is grammaticalized from the lexical verb *iru*, which is now a stative verb denoting ‘be, exist’ (said of animate subjects).<sup>2</sup> Combined with main verbs in the gerundive *-te* form, it functions as an aspectual marker denoting a variety of meanings (see Nakatani 2016 for an overview of the syntactic and semantic properties of *-te iru* and other complex predicate constructions). From the discussions in previous literature (Kindaichi 1955; Fujii 1966; Takahashi 1969; Yoshikawa 1973; Okuda 1978; Teramura 1984; Kudo 1995), we can identify five aspectual senses that the auxiliary verb *iru* paired with the *-te* form of a verb expresses: (i) progressive (or ongoing process), (ii) resultative (or resultant state), (iii) simple state (iv) repetitive/habitual, and (v) perfect. Of these meanings, (i) and (ii) are sensitive to the situation aspect of verbs and verb predicates. They are considered to be basic

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<sup>2</sup> Historically speaking, the lexical verb *iru* was originally a dynamic verb, indicating change of posture from a standing to a sitting position, and later, through the complex verb form *i-tari* [sit-PFCT] ‘have been seated’, it was reanalyzed as a stative verb meaning “to stay, to exist”. The aspectual auxiliary verb use of *iru* is considered to have been established after the verb acquired the existential meaning. See Kinsui (2006) for relevant discussion.

In Kansai dialect, especially in Osaka, the form *i-teru* is frequently used. It is analyzed as the verb *iru* in the *-te iru* form. Kinsui (2006: 260) considers that the verb *iru* in this area has not fully developed into a stative verb, and is stativized by *-teru*, a more phonologically reduced form of *-te iru*.

aspectual meanings in terms of viewpoint aspect. (iii) is a conventionalized meaning based on (ii). (iv) and (v) can take any type of verb and verb predicate except statives. In what follows, I will briefly illustrate those five meanings expressed by the *-te iru* form in terms of situation aspect.

## 2.1 Situation aspects and the progressive/resultative ambiguity

Situation, or lexical, aspects, which are also known as *Aktionsarten*, denote temporal properties of verbs and verb predicates. The best known classification of situation aspects is presented by Vendler (1957), where he identifies four types of situations: states (e.g. *aru* ‘exist’), activities (e.g. *hasiru* ‘run’), achievements (e.g. *sinu* ‘die’), and accomplishments (e.g. *ie o tateru* ‘build a house’). Smith (1997) adds “semelfactives” as another type of situation (e.g. *tataku* ‘hit’). Basically, these situation aspects are characterized by two semantic parameters: homogeneity and dynamicity. Ontologically, there are three types of situations: states, processes, and events (Dowty 1977, Mourelatos 1978). Events here include both Vendler’s achievements and accomplishments, which are telic. Basic situation types are identified by the opposition between “homogeneous” situations (states and activities) and “non-homogeneous” situations (achievements, semelfactives, and accomplishments) and the opposition between “static” situations (states) and “dynamic” situations. These situation types have to do with some of the senses expressed by the *-te iru* form (see Jacobsen 2016 for an overview of how these situation types are manifested in Japanese verbs).

In Japanese, most verbs are eventive or dynamic (Kageyama 1996; Inoue 2001; Sugaya and Shirai 2007). As a consequence, stative verbs (i.e. verbs that denote a current state if put in simple present tense) are limited to such verbs as *aru* ‘exist (said of inanimate subjects)’, *iru* ‘exist (said of animate subjects)’, *iru* ‘need’, *dekiru* ‘be able’, and derived potential verbs (e.g. *kakeru* ‘to be able to write’). These stative verbs either are not used in the *-te iru* form (e.g. *aru* ‘exist’, *iru* ‘exist’, *iru* ‘need’, and *dekiru* ‘be able’), or do not differ in aspectual meaning if they are used in it (e.g. *tigau* ‘differ’ and potential verbs).

Many stative verbs in English correspond to inchoative verbs in Japanese. For example, *siru* means ‘to get to know’ rather than ‘to know’ and *niru* ‘to become alike’ rather than ‘to resemble or be alike’. Other verbs like *aisuru* ‘to love’ and *sumu* ‘to live’, which could not be regarded as inchoative but express a dynamic activity, also require the *-te iru* construction to denote a state.

When activities enter into the *-te iru* construction, they receive an ongoing process interpretation. In example sentences, the glosses for grammaticalized aspectual morphemes are given in small capitals representing their original meanings, as in ‘EXIST-PRS’ for *i-ru*.

- (1) *Taroo ga terebi o mi-te i-ru.*  
 Taro Nom TV ACC watch-GER EXIST-PRS  
 'Taro is watching TV.'

- (2) *Kodomo ga nai-te i-ta.*  
 child NOM cry-GER EXIST-PST  
 'A child was crying.'

Achievements and accomplishments differ from activities. Some events in the *-te iru* construction will be construed as progressive, some as resultative, and others as either of the two depending on the context. For progressive interpretations, the situations must have a process component like activities. For the resultative interpretation, the situation must have a culmination with a change of state. Typically, achievement predicates are instantaneous and have only a culmination point. When combined with *-te iru*, they receive resultative interpretations.

- (3) *Basu ga taaminaru ni tui-te i-ru.*  
 bus NOM terminal LOC arrive-GER EXIST-PRS  
 'The bus has arrived at the terminal.'

- (4) *Heya no akari ga kie-te i-ru.*  
 room GEN light NOM go.out-GER EXIST-PRS  
 'The light of the room is off.'

Unlike English Progressive with achievement verbs, the above examples cannot depict the preliminary stage before culmination, hence they do not mean *the bus is arriving at the terminal* or *the light of the room is going out*. Preliminary stages are expressed by the *-i/e kake-te iru* expression, as in (5).

- (5) *Sono toki boku wa sin-i kake-te i-ta.*  
 that time 1SG TOP die-INF be.about.to-GER EXIST-PST  
 'At that time, I was dying.'

Accomplishments have both a process component and a culmination point. These verbs are ambiguous between ongoing and resultative interpretations, as seen in the following:

- (6) a. *Koori ga yukkuri toke-te i-ru.*  
 ice NOM slowly melt-GER EXIST-PRS  
 'The ice is melting slowly.'
- b. *Koori ga sukkari toke-te i-ru.*  
 ice NOM entirely melt-GER EXIST-PRS  
 'The ice has completely melted.'

- (7) *Taroo wa ziinzu o hai-te i-ru.*  
 Taro TOP jeans ACC wear-GER EXIST-PRS  
 'Taro is wearing jeans./Taro is putting on jeans.'

The nominalizing predicate marker *totyuu da* 'in the middle of' effectively rules out the resultative readings in the above examples. Thus, *nobotte iru totyuu da* and *haite iru totyuu da* depict only ongoing processes before the culmination.<sup>3</sup>

However, not all event verbs are ambiguous. Transitivity can also account for the choice between the two interpretations. Japanese has a number of morphological intransitive-transitive pairs. As pointed out originally by Kindaichi (1950) and further discussed in Okuda (1978), the intransitive verb of such pairs has a resultative meaning, while the transitive one has an ongoing process meaning in the *-te iru* construction. For example, the intransitive-transitive verb pair *kieru* 'to go out (of fire)' and *kesu* 'to put out (fire)' are interpreted differently in terms of aspect.

- (8) a. *Hi ga kie-te i-ru.*  
 fire NOM go.out-GER EXIST-PRS  
 'The fire is out.'
- b. *Taroo ga hi o kesi-te i-ru.*  
 Taro NOM fire ACC put.out-GER EXIST-PRS  
 'Taro is putting out the fire.'

In this pair of examples, the intransitive *a*-example can have only a resultant state reading, whereas the transitive *b*-example has only an ongoing process reading.

Furthermore, accomplishment situations that are formed with activity verbs like *draw a circle* will receive only an ongoing process reading, as in (9). The resultative sense for a transitive accomplishment like this is obtained with the *-te aru* construction, as in (10).

- (9) *Taroo ga maru o kai-te i-ru.*  
 Taro TOP circle ACC write-GER EXIST-PRS  
 'Taro is drawing a circle.'

<sup>3</sup> Kindaichi (1950) proposes a test using *saityuu da* so that only ongoing process interpretations hold with the *-te iru* construction. However, this test does not exclude resultative senses; for instance, *kyaku ga ki-te iru saityuu da* means 'some guests have come right now', rather than 'some guests are coming right now'. The *totyuu da* test focuses on the internal imperfective phase alone and rejects resultative senses. Therefore instantaneous situations are incompatible with this expression (e.g. *\*kyaku ga tuite iru totyuu da*. '\*\*The guests are in the midst of arriving'). Some verbs may sound odd with the use of *totyuu* in the matrix clause (e.g. *?ame ga hut-te iru totyuu da*. 'It is in the midst of raining'), but the converbial form *totyuu de/ni* improves the naturalness (e.g. *ame ga hut-te iru totyuu de kumo wa zyohatu site simau* 'Clouds vanish in the midst of raining').

- (10) *Maru ga kai-te ar-u.*  
 circle NOM write-GER EXIST-PRS  
 ‘A circle has been drawn.’

Resultative senses are available only when the subject undergoes a change of state (Takahashi 1969; Okuda 1978; Kudo 1995). Accomplishment situations whose verbs are intrinsically activities like (9) do not have a change of state phase internally. Hence only the ongoing sense is available, since, although it is externally bounded, it is not telic.

Semelfactives (e.g. *kick*, *blink*, etc.) are often considered to be a kind of achievement because they are instantaneous and telic. However, they differ from achievements and should be an independent situation type (Smith 1997). When they enter into the *-te iru* construction, they are interpreted as iteratives, as in (11).<sup>4</sup> They are similar to, but different from, activities. A single occurrence of a semelfactive situation cannot be interpreted as a process. This is illustrated by the following examples, where a single occurrence is forced by *hito-V suru* [one-V do] ‘to take a V’, as in (12) and (13). Unless the single occurrence of the event has no duration, the *hito-V suru* is not compatible with the *-te iru* construction.

- (11) *Doa o tatai-te i-ru.*  
 door ACC knock-GER EXIST-PRS  
 ‘[Someone] is knocking on the door.’

- (12) *?Doa o hito-tataki si-te i-ru.*  
 door ACC once-knocking do-GER EXIST-PRS  
 ‘[He] is knocking the door once.’

- (13) *Taroo ga toori o hito-aruki si-te i-ru.*  
 Taro NOM street ACC once-walking do-GER EXIST-PRS  
 ‘Taro is taking a walk down the street.’

## 2.2 Perfect readings

Perfect is a grammatical category that signals current relevance of a past situation (Comrie 1976). It differs from the aspectual categories discussed so far in that it correlates a situation with another point in time. Current relevance gives rise to various interpretations, such as resultative perfect, existential perfect, continuous perfect, and hot news perfect (Portner 2003).

<sup>4</sup> Iteratives should be distinguished from repetitives. “An iteration is a single situation, although one involving repeated phases” and “repetitions are relatively widely spaced in time and viewed as more distinct than are iterations” (Binnick 1991: 182).



The *-te iru* constructions can also signal perfect senses (Kudo 1995), as in the following examples.

- (14) *Yamada-san wa syoosetu o takusan kai-te i-ru.*  
 Yamada-MR TOP novel ACC many write-GER EXIST-PRS  
 ‘Mr. Yamada has written a lot of novels.’
- (15) *Kinoo kara ame ga hut-te i-ru.*  
 yesterday since rain NOM fall-GER EXIST-PRS  
 ‘It has been raining since yesterday.’

(14) is an example of existential perfect, which has been called *keiken* ‘experiential’ (Fujii 1966), *kaisō* ‘recollection’ (Teramura 1984), and *dōsa pāfekuto* ‘action perfect’ (Kudo 1995). (15) is a case of continuous perfect, which indicates a persistent situation, which Kudo (1995) calls *jōtai pāfekuto* ‘stative perfect’.

Resultative perfects and resultatives are similar, but they are not the same. The *-te iru* construction expresses both and often corresponds to English Perfect sentences. Probably for this reason, Jacobsen (1992, 2016) does not distinguish between resultatives and perfects in his analysis of the *-te iru* construction. He regards both as “perfect”. However, resultatives and perfects must be distinguished. Only resultatives are compatible with adverbs of unlimited duration such as “still” (Lindsted 2000: 367). In English, *He is still gone* is grammatical but *\*He has still gone*. The Japanese *-te iru* construction, when it is resultative, allows *mada* ‘still’, but it cannot take the adverb when it is perfect. Consider the following examples.

- (16) *Ima mo (mada) tokei ga tomat-te i-ru.*  
 Now too still clock NOM stop-GER EXIST-PRS  
 ‘The clock is (still) not working./The clock is not working (as before).’
- (17) *Kinoo kara (\*mada) tokei ga tomat-te i-ru.*  
 yesterday since still clock NOM stop-GER EXIST-PRS  
 ‘The clock has (\*still) stopped since yesterday.’

Resultatives often become the source of the grammaticalization of perfect (Bybee, Perkins, and Pagliuca 1994; Dahl and Hedin 2000). The *-te iru* form as an aspectual marker seems to have originally been a resultative. Historically speaking, it is considered that the *-te iru* form established its aspectual function in Late Middle Japanese after the verb *iru*, originally a change of state verb meaning ‘to sit’, had developed into an existential stative verb in the Middle Japanese period (Kinsui 2006). Fukushima (2011: 122) argues that in Late Middle Japanese, the *-te iru* construction mainly expressed resultatives with animate subjects, that ongoing process readings were rare, and that existential perfect readings were not found at all. The examples of progressives were limited to verbs of saying, which are not active

motions, and to posture verbs and verbs like *matu* ‘to wait’, in which case the *-te iru* forms can be understood as resultatives. In this sense, the aspectual meanings are more like continuous perfects and resultatives. The *-te iru* form of these verbs appears with a locative phrase, which focuses more on the existence of the subject, and hence is more static than dynamic. It is also known that in Classical Japanese, the simplex forms of verbs were used to express ongoing processes (Suzuki 1999), and in Late Middle Japanese as well, ongoing processes of active motions are expressed by the simplex forms (Fukushima 2004: 51). It seems to be the case that at the earlier stage, the *-te iru* form expressed only static situations without active motion, but later extended the range of meanings into more dynamic ongoing processes and existential perfects.

### 2.3 Simple state readings

There are some verbs whose *-te iru* forms are not construed as either progressive or resultative, but as simply stative. Kindaichi (1950, 1955) treats these verbs as a unique class of verbs, called “fourth type”, which do not appear conclusively (or sentence-finally) in the simple past or present tense, but instead always in the *-te iru* form, representing a static situation like stative verbs. Kindaichi’s fourth-type comprises a fairly small number of lexically designated members, including *sobieru* ‘to tower’, *bakageru* ‘to be absurd’, *sugureru* ‘to outstand’, and *zubanukeru* ‘to excel’.

- (18) Yama        ga        kumo   yori   takaku   sobie-te        i-ru.  
       mountain NOM cloud than higher tower-GER EXIST-PRS.  
       ‘The mountain towers high above the clouds.’

In these examples, the simplex forms, *sobie-ru* or *sobie-ta*, sound unnatural; they would be understood as inchoatives, if at all. The unnaturalness of the simple forms lies in the fact that such a change of state is not possible pragmatically.<sup>5</sup>

The function of the *-te iru* with fourth-type verbs is considered not to be of view-point aspect, but rather to be of situation-type shifting, stativization in this case. The simplex forms of these verbs would be understood as events, and when they occur in the *-te iru* form, they would be understood as resultatives. However, the construal of the form is taken as excluding the culmination and presenting the state alone.

<sup>5</sup> In reality, the simple form is not always unnatural. As Kageyama (2012: 27) points out, the present form *sobieru* is used as a two-place predicate requiring a location and a subject to describe the permanent property of the locative argument, as in (i).

(i) *Itaria hokubu ni wa arupusu no yamayama ga sobie-ru.*  
     Italy north in TOP the.Alps GEN mountains NOM tower-NONPST  
     ‘In the northern part of Italy, the Alps tower above.’ (Kageyama 2012: 24)

Simple state readings are not limited to fourth-type verbs. Resultative sentences are easily understood as simple states, too. This fact indicates that resultative and simple state readings are semantically contiguous. Depending on the context, *magat-te iru* in (19) may be understood as a resultative, which suggests the tree used to be straight; or a simple state, which does not have such a presupposition and simply suggests that it is not straight.

- (19) *Sono ki wa migi ni magat-te i-ru.*  
 that tree TOP right LOC be.bent-GER EXIST-PRS  
 ‘The tree has bent to the right/The tree is bent to the right (naturally).’

Furthermore, if the subject in (19) is replaced with *miti* ‘road’, the sentence will exclude a resultative reading, as in (20).

- (20) *Sono miti wa migi ni magat-te i-ru.*  
 that road TOP right LOC be.bent-GER EXIST-PRS  
 ‘The road turns right.’

The aspectual interpretation of the *-te iru* between resultatives and simple states is determined either contextually or compositionally by the arguments of the sentence. This indicates that resultative and simple state readings are closely related and semantically contiguous.

For this reason, it is sometimes unclear, perhaps not important to native speakers at all, whether the *-te iru* forms of some event verbs should be considered resultatives or simple states. For example, a psych-verb like *oboeru* ‘remember’ is an atelic verb. When it is used in the *-te iru* form, as in (21), it is difficult to decide which meaning the form represents.

- (21) *Denwa bangoo o oboe-te i-ru?*  
 telephone number ACC remember EXIST-PRS  
 ‘Do you remember the phone number?’

As shown by the translation, English requires that the verb occur in the simple present form as stative, so one might claim that the *oboete iru* in the example above should be a simple state, but a resultative reading could replace it, should the situation be one in which, for example, the speaker has asked a patient to memorize a phone number for a memory test.

## 2.4 Repetitive and habitual meanings

The *-te iru* construction can express multiple occurrences of the same situation.

- (22) *Taroo ga gyooza o dondon tabe-te i-ru.*  
 Taro NOM dumpling ACC fast eat-GER ASP  
 ‘Taro is eating dumplings one after another.’

Situation types are not relevant to the repetitive sense. Any situation type can bear repetitive senses. (23) is a case of achievements.

- (23) *Sakana ga tugitugi sin-de i-ru.*  
 fish NOM one.by.one die-GER EXIST-PRS  
 ‘Fish are dying one after another.’

Repetitive actions can be understood as habitual, as in (24).

- (24) *Kodomo-tati wa basu de gakkoo ni kayot-te i-ru.*  
 child-PL TOP bus by school to travel-GER EXIST-PRS  
 ‘The children here go to school by bus.’

The simple present form, *kayou* ‘commute’, also can express a habitual sense. Teramura (1984: 128–130) explains the difference as follows. The *-te iru* habitual presupposes that the habitual action started at some point in the past and has taken place repeatedly up to the present, whereas the simplex form habitual does not have such a presupposition. Therefore, adverbials such as *konogoro* ‘recently’ and *saikin* ‘these days’, which signal a change of situation, are more likely to occur with the *-te iru* construction.

## 2.5 *-te iru* as a continuous aspect gram

As illustrated above, the Japanese *-te iru* construction can represent progressives (except instantaneous verbs), resultatives of the subject, perfects, simple states, repetitives, and habituals. It might look quite unique that all the aspectual meanings, especially progressives, resultatives, and perfects are encoded in a single form, for they are typically expressed by different grams in English, i.e. Progressive by *be V-ing*, Resultative by *be V-en*, and Perfect by *have V-en*. The English sentences, *It is melting*, *It is melted*, *It has melted*, are all expressed by *toke-te iru* [melt-GER EXIST-PRS] in Japanese. Japanese encodes all the aspectual meanings in a single gram on the basis of a logic that is different from that for the English grams. The Japanese *-te iru* form is best classified as continuous aspect gram.

Continuous is classified as a subdivision of imperfectivity in Comrie (1976). It excludes habituals and subsumes progressives (with dynamic verbs) and non-progressives (with dynamic and stative verbs). As pointed out by Bybee, Perkins and Pagliuca (1994: 137–139), however, Comrie’s illustration of “continuous aspect”

is obscure, and Dahl (1985) does not recognize “continuous” as an aspectual gram. For this reason, Bybee, Perkins and Pagliuca (1994) do not consider “continuous” as an independent gram-type typologically.

Let us depart from the Comrie’s definition of continuous here. I redefine “continuous” as an aspect category that is independent of imperfective, and following Kudo (1995), I propose that the Japanese *-te iru* is a legitimate candidate to be called “continuous”. Continuous is defined as an aspectual category that views a situation that has been brought about by the process or event denoted by the verb or verb predicate as persistently existing at the reference time.

Like progressive aspect, continuous aspect is sensitive to the situation type of the verb or verb predicate: it does not take stative verbs or verb predicates. Continuous aspect, however, can represent perfect meanings, which progressive aspect does not include. Continuous aspect is similar to perfects, but it is different in that, although the English Perfect can take statives, as in *I have been here since morning*, the Japanese Continuous construction, *V-te iru*, cannot take them. In Japanese, the stative verbs can express continuous perfect meaning in the simplex form, as illustrated in (25).

- (25) *Boku wa asa kara koko ni i-ru.*  
 1SG TOP morning since here LOC stay-PRS  
 ‘I have been here since morning.’

In this section, we have observed the core and extended meanings of the Japanese *-te iru* construction. In the subsequent two sections, we will explore corresponding constructions in Newar (Section 3) and Meche (Section 4). These two languages also have grammaticalized existential verbs as aspect markers, and I will illustrate that they are also to be considered continuous aspect grams.

### 3 Newar

Newar, officially known as Nepal Bhāṣā, is a Tibeto-Burman language mainly spoken in the Kathmandu Valley of Nepal. It is an ergative language with the same basic word order as Japanese. The verbs in Newar inflect for tense, aspect, and modality in a special type of person marking called the “conjunct/disjunct” dichotomy (Hale and Shrestha 2006), as shown in Table 1.

**Table 1:** Verb conjugation in Newar (e.g. *wən-e* ‘to go’)

Conjunct series	Future/Irrealis <i>wən-e</i>	Nonfuture/Realis <i>wən-a</i>	
Disjunct series	Future/Irrealis <i>wən-i:</i>	Nonfuture perfective <i>wən-ə</i>	Nonfuture neutral <i>wā:</i>

The nonfuture disjunct form, as in *wã:*, refers to either a past or present situation. Although often construed as present habitual, it can be considered aspectually neutral. Intransitive change of state verbs in this form represent simple states (e.g. *sya*: ‘is aching’ for *sya* ‘to ache’). The nonfuture perfective disjunct is like aorist. It refers to a past perfective situation. The two future forms and the nonfuture conjunct are aspectually non-progressive: they signal present habitual or future/past eventive situations but do not signal progressive situations. Interestingly, all the forms but the nonfuture perfective disjunct form may be understood as habitual aspect.<sup>6</sup> The nonfuture perfective disjunct is always used to develop discourse. In this sense, it is purely perfective.

Newar has an aspectual verbal complex similar to Japanese *-te iru*. It is formed with a main verb in the concatenated form and the aspectual auxiliary verb *cwən-e*, which is also used as a lexical verb meaning existence of an animate being. The semantic range expressed by this Newar complex verb predicate is, however, narrower than that of the *-te iru* construction. It expresses ongoing processes, as in (26), and resultant states, as in (27). A simple state is expressed in the nonfuture neutral disjunct form, as in (28).

- (26) *Ram ja nəy-a cwən-ə.*  
 Ram rice eat-CM EXIST-NFPD  
 ‘Ram is/was eating rice.’

- (27) *Lukha cal-a cwən-ə.*  
 door open-CM EXIST-NFPD  
 ‘The door is open.’

- (28) *Lukha ca:*  
 door open.NFND  
 ‘The door is open’

Like Japanese, the meanings of the *cwən-e* construction are determined depending on the situation types of the main verb, and transitivity is relevant to the meanings as well. The resultative sense is available only with intransitive event verbs (i.e. non-causative achievements and accomplishments), as in (27); otherwise, with activities and transitive events (causative achievements and accomplishments), only progressive senses are available. One exception to this generalization is found with agentive

<sup>6</sup> There is a difference in terms of frequency between the habitual by the future forms and that by the nonfuture forms. The former signals that the habitual situation is highly frequent, whereas the latter signals that the habitual situation is not highly frequent (Kiryu 2002, 2010). Although personal habitual activities may be expressed by either form, depending on the degree of frequency, generic situations are only expressed by the future (disjunct) form. The generic situation never fails to hold true, hence it guarantees the highest frequency.

intransitive accomplishment verbs such as directed motion verbs and posture verbs. They may be understood either as progressives or resultatives, depending on the context.

- (29) *Ram Kipuli: wən-a cwən-ə.*  
 Ram Kirtipur.LOC go-CM EXIST-NFPD  
 ‘Ram is/was going to Kirtipur./Ram has gone to Kirtipur.’

- (30) *Ram (buluhū:) mec=ε: phyetun-a cwən-ə.*  
 Ram (slowly) chair=LOC sit-CM EXIST-NFPD  
 ‘Ram is/was (slowly) sitting on the chair.’

Sentence (31), with a transitive verb, cannot be construed as a resultative. The resultative of transitive events is expressed by another aspectual auxiliary verb *tə-ye*, which literally means ‘to put’, as in (32).

- (31) *gitā: pərsi sin-a cwən-ə.*  
 Gita.ERG sari put.on-CM EXIST-NFPD  
 ‘Gita is putting on a sari.’

- (32) *gitā: pərsi sin-a təl-ə.*  
 Gita.ERG sari put.on-CM PUT-NFPD  
 ‘Gita has a sari on.’

Ongoing process or preliminary stage readings are not available with intransitive event verbs (e.g. *lwə-ye* ‘to become fat’, *si-ye* ‘to die, go out (of light, fire)’, etc.). Ongoing processes of intransitive events are expressed by the auxiliary verb *wə-ye*, lit. ‘come’, as in (33). Preliminary stage readings are expressed by the prospective auxiliary verb *tyən-e*, as in (34).

- (33) *Cwapu nəy-a wəl-ə.*  
 ice melt-CM EXIST-NFPD  
 ‘The ice is melting.’

- (34) *A: mətə si-i tynən-ə.*  
 now light die-INF PRSP-NFPD  
 ‘The (candle) light is/was going off.’

Newar has a clear morphological distinction between states and nonstates. Any verb in Newar will be static when it occurs in the nonfuture neutral disjunct form, and will be dynamic when it occurs in the other forms. For example, an existential situation is expressed by the nonfuture neutral disjunct form of the verb *də* ‘exist’,

as in (35), but the nonfuture perfective disjunct form signals a change of state, as in (36).

- (35) *Ji=ke dhyeba du.*  
 1SG=LOC money exist.NFND  
 'I have money with me.' (Lit. Money exists with me.)
- (36) *Ji=ke dhyeba dət-ə.*  
 1SG=LOC money exist.NFPD  
 'I got money.' (Lit. Money came into existence with me.)

The verb *də* can be used in the *cwən-e* construction, meaning a resultative, as in (37).

- (37) *Ji=ke dhyeba dəy-a cwən-ə.*  
 1SG=LOC money come.into.existence-CM EXIST-NFPD  
 'I found I have money with me.'  
 (Lit. Money came into existence and it is with me.)

Unlike the Japanese *-te iru* construction, the *cwən-e* construction cannot be used to describe simple states. Simple states are expressed by the nonfuture neutral disjunct form (and sometimes with a nominalizer as well). Therefore, *this dog is dead* will be rendered in different ways depending on whether it is a resultative or simple state.

- (38) a. *Thwə khica sin-a cwən-ə.*  
 this dog die-CM EXIST-NFPD  
 'This dog is dead!' (resultative with a mirative overtone)
- b. *Thwə khica si:=mhə khə.*  
 this dog die.NFND=NMLZ COP.NFND  
 'This dog is dead.' (a simple state reading)

The Newar *cwən-e* construction can express continuous perfect meaning when it takes temporal expressions like *X nisē*: 'since X', as in (39).

- (39) *Mhigə: nisē: yan-a/wəy-a cwən-ə.*  
 yesterday since do-CM/come-CM EXIST-NFPD  
 '[He] has been doing/has come since yesterday.'

Existential perfect meanings are not expressed by the *cwən-e* construction, but by the completive aspect auxiliary verb *dhune*, originally meaning 'to finish', as in (40). The *V=gu du* construction – the nominalizer =*gu* and the existential verb *du* – expresses hot news and experiential perfect meanings.



- (40) *Ji Japan=ε: chəkə: wən-e dhun-ə.*  
 1SG Japan=LOC once go-INF FINISH-NFC  
 ‘I have been to Japan once.’

- (41) *Chə-mhə rogi: nǎ: wə:gu du.*  
 one-CLF ailed too come=NMLZ exist.NFND  
 ‘A sick person has come.’

The above data show that the *cwən-e* construction is not fully grammaticalized as a perfect gram.

## 4 Meche

Meche, another Tibeto-Burman language spoken in the southeastern Nepal, belongs to the Bodo-Garo branch and is considered to be the western dialect of the Bodo language in contrast to Boro, the eastern dialect spoken in Assam (Kiryu 2012). Meche is a nominative-accusative language with SV and SOV word order and has no person marking system.<sup>7</sup>

Meche has nine finite tense-aspect suffixes: *-a?* (past affirmative), *-yi* (past negative), *-nai* (future affirmative), *-le* (nonpast change of situation), *-a* (nonpast negative), *-ə* (habitual), *-bai* (perfect/past), *-dəŋ* (progressive, resultative, existential perfect), and *-akəi* (perfect negative). The aspectual marker that corresponds to the Japanese *-te iru* is *dəŋ*, which is considered to be grammaticalized from the existential verb *dəŋ* ‘to exist’, one of the two stative verbs in this language. The aspectual marker expresses all the possible meanings available with the Japanese *-te iru* construction, except for habituals and simple states.

- (42) *Bisa=ya əŋkam ja-dəŋ.* (Progressive)  
 Child=NOM cooked.rice eat- EXIST.PRS  
 ‘The child is eating cooked rice.’

- (43) *Nəŋ=ni bucula ji-dəŋ.* (Resultative)  
 2SG=GEN shirt get.torn- EXIST.PRS  
 ‘Your shirt is torn.’

- (44) *Gəbaŋin na? təi-gli-dəŋ.* (Repetitive)  
 a.lot fish die-PL- EXIST.PRS  
 ‘A lot of fish are dying.’

<sup>7</sup> The nominative and accusative markers are not always obligatory and can be omitted.

- (45) *Dasə pəi-dəŋ, aŋ.* (Continuous perfect)  
 Just.now come- EXIST.PRS 1SG  
 ‘I’ve just come.’
- (46) *Nəŋ lama=kəu nu-dəŋ da?* (Existential perfect)  
 2SG road=ACC see- EXIST.PRS SFP  
 ‘You have seen the way, haven’t you?’  
 (i.e. You know how to get there, don’t you?)

Meche verbs are capable of taking at the most one of the nine tense/aspect suffixes, and thus a sequence of two or more suffixes is prohibited. Therefore, past progressives or resultatives cannot be expressed by *-dəŋ* plus another tense suffix. Past events are expressed by adding the temporal particle *mən* after *-dəŋ*; the particle marks the situation as belonging to the past with no current relevance. Thus the above examples will be interpreted as past events only if the temporal particle is added to them. Future progressive is totally impossible grammatically but can be implied by the future suffix.

The aspectual marker *-dəŋ* is also sensitive to situation aspects in a limited way. It can occur with all verbs except the existential *dəŋ* and the copular verb *aŋ*, like the Japanese and Newar counterparts. These two are the only non-dynamic verbs in Meche. In Meche, the distinction of ongoing process, resultative, and iterative readings is determined by the situation aspects of main verbs. Unlike Japanese and Newar, the transitivity of verb is not relevant. Activities are interpreted as progressive in the *-dəŋ* construction. Accomplishments may be interpreted as either progressives or resultatives in the *-dəŋ* construction. However, achievement verbs (e.g. *təi* ‘to die’), when followed by *dəŋ*, cannot have a progressive (or preliminary stage) meaning but have only a resultative (47) or repetitive (44) reading, as in Japanese and Newar. A transition toward the culmination can be expressed by the combination of the suffix *-in*, an imperfective adverbial marker, and *-dəŋ*, as shown in (48)<sup>8</sup>.

- (47) *Be cima=ya təi-dəŋ.*  
 this dog=NOM die- EXIST.PRS  
 ‘This dog is dead.’
- (48) *Be cima=ya təi-in-dəŋ.*  
 this dog=NOM die-IPFV- EXIST.PRS  
 ‘This dog is dying.’

<sup>8</sup> The *-in-dəŋ* overlaps the meanings expressed by the English Progressive, except future meanings like *I’m leaving tomorrow*. The suffix *-in* itself forms an adverbial phrase with a verb, indicating a simultaneous situation.

The *-dəŋ* construction may signal resultatives with transitive telic situations. For example, *gai-dəŋ* with an accomplishment verb *gai* ‘to plant’ is ambiguous between ongoing process and resultative readings, as in (49). This is not the case with the *-te iru* construction and the Newar *cwan-e* construction.

- (49) *Mai gai-dəŋ.*  
 Rice plant-EXIST.PRS  
 ‘[They] are planting rice./Rice is planted.’

*Dəŋ* cannot express simple states. Meche has an adjectivizer that turns change of state verbs into adjectives. It is the prefix *gV-*, where the *V* is a harmonious vowel with the stem vowel. For example, addition of *gV-* to *ra* ‘to become hard’, *ceu* ‘to become rotten’, and *təi* ‘to die’ yields *gəra* ‘hard’, *geceu* ‘rotten’, and *gətəi* ‘dead’, respectively.

As illustrated above, the Meche *dəŋ* construction covers progressives, resultatives, and perfects (both existential and continuous). It is also entitled to be regarded as a continuous aspect gram.

## 5 The ambiguity between progressive and resultative

Having introduced the basic properties of the relevant constructions in Japanese, Newar, and Meche, we are in a position to make a comparison among them. Table 2 is a summary of the aspectual meanings expressed in the three languages. Like the Japanese *-te iru* construction, the aspectual constructions in Newar and Meche signal ongoing processes (progressives), resultant state (resultatives), and continuous perfects. In this sense, the two markers can be considered to be continuous gram-types as well. As for progressives, they cannot represent progressives of achievements, indicating a preliminary stage. Achievements in the continuous constructions are always interpreted as resultatives. They can view only a state after the culmination of an achievement situation.

The three languages, however, differ to some extent as well. First, progressives of intransitive accomplishments can be expressed by the continuous grams in Japanese and Meche, while they are expressed by a different expression in Newar. Secondly, they differ in the range of situation types that enter into resultative readings. For resultative readings, Japanese and Newar require that the situation be a non-causative change of state, whereas Meche does not have this restriction. This means that the resultant state is that of the subject. It is often the case that some of the semantic restrictions with the source is carried over to the grams. Both Japanese and Newar

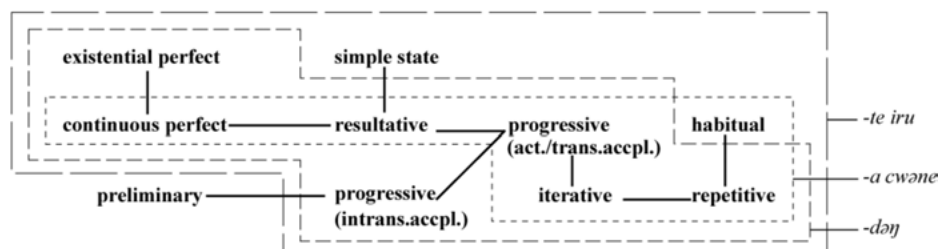
**Table 2:** Semantic range of the continuous constructions in the three languages

Aspectual meanings	Japanese	Newar	Meche
Progressive (activities)	+	+	+
Progressive (transitive accomplishments)	+	+	+
Progressive (intransitive accomplishments)	+, <i>-te kuru/iku</i>	<i>wə-ye</i>	+, <i>-in-dəŋ</i>
Progressive (achievements) (Preliminary)	<i>-i/e kakeru</i>	<i>tyən-e</i>	<i>-in-dəŋ</i>
Iterative	+	+	+
Repetitive	+	+	+
Habitual	+	+	-ə
resultative (vi)	+	+	+
resultative (vt) SUBJ	+ (reflexives)	<i>tə-ye</i>	+
resultative (vt) OBJ	<i>-te aru</i>	<i>tə-ye</i>	+
continuous perfect	+	+	+
existential perfect	+	<i>dhune, tə-ye</i>	+
simple state	+	NFND	-ə

have grammaticalized existential verbs that require animate subjects. This semantic restriction still remains with the grams as a transitivity restriction. In turn, the source of the Meche *dəŋ*, i.e. *doŋ* ‘exist’ does not have to do with animacy at all, hence there is no selectional restriction on the subject with the continuous gram as well. Thirdly, there is a difference in the possible range of extended meanings. Simple state readings are only available with the Japanese *-te iru* construction. Newar has an independent form (i.e. nonfuture neutral disjunct) that can signal simple states and Meche has a habitual marker that covers a stative reading. This may block the extension of the meaning of the grams into simple state readings.

## 6 Semantic correlation represented by semantic maps

The semantic relationships among the six senses can best be captured by employing the semantic map model, which is “a method for describing and illuminating the patterns of multifunctionality of grammatical morphemes that does not imply a commitment to a particular choice among monosemic and polysemic analyses” (Haspelmath 2003: 213). A semantic map of aspectual meanings is shown in Figure 1, where the senses that are covered by the English progressive are included for the sake of comparison.



**Figure 1:** A semantic map of typical continuous functions/the boundaries of the three grams in Japanese, Newar, and Meche

This map may also indicate the paths of grammatical extension of existential verbs as aspectual markers. As discussed in Section 2, the Japanese *-te iru* form at the early stage used to indicate mainly resultant states and ongoing situations without active motion, similar to continuous perfect. It seems to be the case that the form has extended the range of meanings into more active ongoing processes and existential perfects. The extension from resultative (or possibly from continuous perfect) to progressive may occur when the resultant state is not simply construed as static but as controlled by the subject. Such a construal is easily available, for instance, with posture verbs like *sit* and *stand*. After assuming a sitting or standing posture, maintaining it appears to be stative. However, when the subject is animate, the resultant posture can also be construed as an activity that is controlled and maintained by the subject. Such a context may trigger the reanalysis of resultative to progressive. To verify this assumption, we need some more historical evidence. I leave this question open to future scrutiny.<sup>9</sup>

Another point of typological interest is the simple state reading in Japanese. As discussed by Bybee, Perkins, and Pagliuca (1994), resultatives are the source of grammaticalization of perfects. The semantic map in Figure 1 also suggests the path of grammaticalization from resultatives to statives as observed in Japanese. Newar and Meche have derivational means to mark simple states, the nonfuture neutral disjunct form in Newar and the adjectivizer and the habitual suffix in Meche. Since Japanese has no such device, the *-te iru* construction arguably plays such a role as a stativizer.

The continuous constructions in the three languages bear perfect senses, but the continuous construction in Newar can express only continuous perfects while those in Japanese and Meche express existential perfects as well. Based on this fact, it can be said existential perfect is more grammaticalized a sense than continuous perfect.

<sup>9</sup> Shirai (1999: 678) also presents a similar idea from crosslinguistic evidence. He considers that reflexive verbs including verbs of wearing and verbs of position and location have two components: “the actions described by them: the subject does something results in the *change* of its own state”, which in turn leads to the ambiguity between progressive and resultative.

## 7 Conclusion

In this chapter, we first have discussed the aspectual meanings that the Japanese *-te iru* form represents, and have identified it as a continuous aspect gram, which covers progressives (ongoing processes), resultatives, and perfects. We have further confirmed the continuous aspect as a valid typological gram through a comparison of the Japanese *-te iru* form with the corresponding existential aspectual markers in two Tibeto-Burman languages, Newar and Meche. A semantic map analysis, based on the contrastive study of the three languages, has also effectively described a typological overview of the semantic relations of continuous grams. The constructions are all formed with existential verbs, representing progressive (ongoing processes), resultative, and iterative readings as the basic senses. They have some senses extended from the basic ones, but the extended senses do not overlap completely among the three languages. Simple state readings are only available to the Japanese *-te iru* construction. The continuous constructions in Japanese and Meche both have fully developed perfect senses.

## Additional abbreviations

CM = concatenation marker; HAB = habitual; IPFV = imperfective; NFC = nonfuture conjunct; NFND = nonfuture neutral disjunct; NFPD = nonfuture perfective disjunct; PRSP = prospective

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# 21 Modality in Japanese from a crosslinguistic perspective

## 1 Introduction

Modality is a notoriously elusive concept which has been defined in rather diverse ways. Furthermore, the study of modality as a grammatical category is relatively new, and has taken off, so to speak, only rather recently, since the 1980s. Especially since the 1990s it has become one of the most popular topics in linguistics, both in the West and in Japan. The premises under which modality has been researched in Japan and in the West are quite different, though.

This chapter aims to serve a two-fold purpose. First, it introduces the way modality has been studied in Japan with Japanese as the subject of study (Section 2). This is somewhat different from the way it has been studied in general linguistics, and may serve as an inspiration to, or may at least be informative for, general linguistic studies of modality. Second, modality in Japanese is discussed from a number of crosslinguistic viewpoints (Section 3), namely, as the expression of possibility and necessity in language (3.1), comparing modal systems and mood (3.2), from the perspective of grammaticalization research (3.3), investigating the layered structure of the clause (3.4), and combining the grammaticalization and the layering perspective. This in turn may serve as an inspiration for future research on Japanese modality. A short paragraph on modality in contrastive studies (Section 4) and a conclusion (Section 5) follow.

## 2 The tradition of the study of modality within Japan

Modality has become a major research topic in Japanese linguistics since the late 1980s, at the turn to the 1990s. A term that was previously almost unheard of suddenly took center stage. Nevertheless, it would be a mistake to assume that this sudden surge came out of the blue. Quite the contrary, modality, if taken in a broad sense, had been a very popular and important area of research already from a long time ago, but subsumed under a different heading, namely that of *chinjutsu-ron* 'predication theory'. It is difficult to fully understand and appreciate the characteristic features of modern modality research in Japan without background knowledge of the historical precursors. Therefore, this section will first give an overview of these historical precursors in Section 2.1, before describing the modern main stream approach to modality in Japanese linguistics in Section 2.2, and some alternative approaches in Section 2.3.

## 2.1 Predication theory – from Yamada to Tokieda to Watanabe

The term *chinjutsu* ‘predication’ was coined by one of the great founding figures of modern Japanese linguistics, YAMADA Yoshio (1873–1958). He was strongly influenced by state-of-the art English and German grammars of his time, in particular J. C. A. Heyse’s *Deutsche Grammatik*, which appeared in numerous editions from 1814, and Sweet’s *New English Grammar* (1892). These scholars were concerned with the nature of the clause as a unit of thought, and grammatically as the linking of two major obligatory elements, the subject and the predicate. Heyse identified the verb as the center of the clause/sentence (the German term *Satz* has both meanings). The most important function of a clause/sentence is predication (*Aussage*), and the element of the clause/sentence that bears the predication is the verb (Heyse 1868: 248–249). This understanding of *Aussage* ‘predication’ is the basis for Yamada’s term *chinjutsu*. Sweet defined the sentence as “the expression of a complete thought or meaning” (Sweet 1990 [1892]: 155), and Heyse likewise viewed a clause/sentence as “a complete, coherent and independently understandable predication or utterance of a thought” (Heyse 1868: 248).

Yamada in principle agrees when he defines, “A clause is a thought that presents itself by borrowing the outer shape of language” (Yamada 1908: 1187; cf. also 1165–1166 discussing Sweet and Heyse). Concerning the manner in which thoughts turn into language, he felt the need to add a psychological dimension to the definition of clause and he found it in the concept of ‘apperception’, which is central to the theory of Wilhelm Wundt (1832–1920), the first psycholinguist. For Wundt, clauses/sentences are “the linguistic expression of the willful structuring of a total conception into units which stand in logical relationships with each other” (Wundt 1900: 240). Apperception is the psychological process which is responsible for the integration and structuring of various elements that make up conceptions (Wundt 1900: 244–245). This ‘apperception’ then, can operate in all kinds of clauses, even if superficially incomplete, as long as they form a complete thought. Following this idea, for Yamada, *chinjutsu* ‘predication’ is the apperceptive role of predicates (verbs and adjectives) in predicative (declarative, interrogative, imperative) clauses (cf. Yamada 1908: 1238–1239). Thus, for Yamada, the fundamental question related to ‘predication’ (*chinjutsu*) was how clauses are formed.

Yamada’s concept was eagerly taken up by other grammarians and shifted in diverse directions. Miyake (1934) distinguished himself through his relatively scientific approach to the description of the Japanese language, which is based on phonological analysis. Like Yamada, he also sees *chinjutsu* in predicative clause types, but unlike Yamada, he essentially considers it as an element at sentence level and not at clause level (adnominal clauses, for him, have no *chinjutsu*; cf. Miyake 1934: 18). Thus, for him, *chinjutsu* is what makes a sentence a sentence (note that from this point on, the Japanese concept of *chinjutsu* starts to diverge from the original general linguistic concept of predication). Also, in a radically innovative step, he sees the locus of

*chinjutsu* ‘predication’ not in the (lexical) verb itself, like Yamada, but in the inflectional endings of the verbs, in sentence-final particles, and in sentence intonation (Miyake 1934: 23–24). Mio (1939) argued that Yamada’s *chinjutsu* concept may be too broad and unspecific. He suggested dividing it into a ‘clause integrating function’ (*tōitsu sayō*) and a ‘judgment function’ (*dantei sayō*), which operates on top of the ‘clause integrating function’, thus creating two layers. It is the latter which is the true *chinjutsu* ‘predication’ (Mio 1939: 77f). With this division between ‘clause integration’ and ‘judgment’, Mio already proposes what would be the main point in Watanabe Minoru’s *chinjutsu* theory (see below).

The *chinjutsu* concept of Yamada and his pre-war successors was concerned with what makes a clause a clause, and later, a sentence a sentence. It is thus related to sentence moods, but hardly to modality as a grammatical category. It was TOKIEDA Motoki (1900–1967) and his successors who gave the concept an entirely new twist, and who, still under the name of *chinjutsu* ‘predication’, moulded the concept of *modariti* in current Japanese linguistics, which is fundamentally based on the idea of subjectivity.

TOKIEDA Motoki, who is often viewed as one of a triad of most influential scholars in the history of National Language Studies together with YAMADA Yoshio and HASHIMOTO Shinkichi, came forward with a new subjectivized view of language as a process which, in principle, can only be investigated through introspection. He strongly opposed objectivist Western linguistics, and revealed a fervent nationalism in his writings. Tokieda saw language primarily as the activity of the speaking subject (Tokieda 1950: Section 1.3). He divided all morphemes (*go*) into objective *shi* (content words) and ‘subjective’ *ji* (function words). The subjective *ji* express the speaker’s judgment, while the *shi* express objective conceptual contents of things and states of affairs (Tokieda 1950: Ch. 2). In the structure of clauses, a *shi* is always followed by a *ji*, thus forming “nested boxes” structures. If no overt *ji* is given, a zero-*ji* has to be posited (Tokieda 1950: Ch. 3). For him, it is the subjective *ji* which have the predicative (*chinjutsu*) function, and not the predicates, which represent objective material (Tokieda 1941: 334). That is, *chinjutsu* can in principle be identified with subjectivity.

Note that for Tokieda, unlike Yamada, *chinjutsu* is not important to explain what makes a clause a clause, or a sentence a sentence. It is about the speaker’s expression in the sentence. While the idea of predication itself goes back to Yamada, the idea to identify predication with a specific set of dependent morphemes, and at the same time identify those morphemes with subjectivity is clearly not something intended by Yamada. It is furthermore far removed from the original general linguistic concept of ‘predication’. This idea has become, however, the most fundamental idea behind the concept of *modariti* in modern Japanese linguistics. In this sense, the representative concepts of modality in modern Japanese linguistics can be labeled appropriately as Tokiedan.

Despite obvious shortcomings, the ‘predication theory’ of the Tokiedan brand continued its advance. WATANABE Minoru set an influential milestone in 1953 when he differentiated *chinjutsu* as subjective and communicative (hearer-oriented) function expressed mainly by sentence-final particles, and concluding a sentence, from *jojutsu* (also ‘predication’) as clause integration expressed mainly by the predicate. Grammatically speaking, it is *jojutsu* which is closer to Yamada’s original *chinjutsu*, since Yamada’s *chinjutsu* is identified with the predicate in the (potentially subordinate) clause. Watanabe thus liberates *chinjutsu* from its predicative function for purer subjective expression in the Tokiedan sense. However, while Tokiedan in principle, he also brings some element of Yamada’s original concept back by articulating the syntactic role of *chinjutsu* in sentence-formation.

In contrast to the Tokiedan mainstream of Japanese linguistics, and in ‘predication theory’, with its strong nationalistic leanings, which seemingly developed their ideas independent of Western linguistics, other scholars preferred to frame the same or a similar idea in terms of concepts developed by the Swiss linguist Charles BALLY. Bally advocated the bipartition of sentence elements into *dictum* and *modus*. The former is the sentence contents, the latter the expression of the speaking subject. He primarily identified the locus of the *modus* in a sentence with verbs of emotion and judgment and their overt and covert subjects (Bally 1965 [1932]: 36–37). Bally’s linguistic thought was introduced to Japan through translations and articles from the late 1920s on by KOBAYASHI Hideo, and is widely cited by some of the authors associated with *chinjutsu-ron* ‘predication theory’. However, his ideas were not read and adopted in any detail, and those who cite him make clear that they have learned about his ideas not from his original writings but through the filtering by Kobayashi. One of the major scholars who cited him in the *chinjutsu* debate in fact made the embarrassing mistake of identifying *modus* with the objective component and *dictum* with the subjective component (Kindaichi 1953: 34). It appears that the reference to Bally fulfilled mainly two functions. First, it served as an inspiration, as Bally seemed to confirm that the Japanese intuitions about objective vs. subjective contents in the language had a broader foundation in linguistics. Second, it allowed those scholars who did not identify themselves with the nationalistic linguistic tradition of Tokieda and Watanabe (such as Mikami and Kindaichi; see below) to use different terminology for the same or similar concepts, thus indicating a more open- or internationally-minded approach.

Important scholars referring to Bally in their concept of *chinjutsu* include HAGA Yasushi and MIKAMI Akira. Mikami adopted the *dictum* vs. *modus* bi-partition (1953: 20; 1959: 116) and he related the *modus* part to ‘moods’ (a term rarely used in Japanese linguistics until then). The moods, such as finite mood or imperative mood, are identified with specific inflectional verb forms and particles (Mikami 1959: 123–127). Mikami also pointed forward to Masuoka’s (1991) *modariti* concept by including topics in the *modus* part of the sentence. Haga (1954, 1982) also adopted the *dictum* vs. *modus* bi-partition, but most importantly he distinguished

two types of ‘predication’, judgmental predication (*jutteiteki chinjutsu*) and communicative predication (*dentatsuteiki chinjutsu*) (Haga 1954: 58; he later also used the terms ‘modus’ of judgment and ‘modus’ of communication (Haga 1982: 44–46)). Both types of predication are associated with specific sentence types. KINDAICHI Haruhiko (1953) proposed a different classification of objective vs. subjective linguistic expressions from Tokieda when he acknowledged subjectivity only for non-inflecting suffixes. He identified his new classification with Bally’s *dictum* vs. *modus*, as filtered by Kobayashi.

Crucially, at this point of time, which is in the early 1950s, and specifically with Haga (1954), all the fundamental elements of the new *modariti* concept in modern Japanese linguistics of the 1990s were already in place.

## 2.2 From the 1970s to the current modern mainstream approach to study of modality

Uyeno (1971) was probably the first scholar to use the term *modality* for Japanese. She did so in an English piece of writing (a PhD thesis), but the understanding behind it comes from the Japanese tradition, as she uses the term very broadly for particles, sentence types, modal suffixes etc., without providing a definition. SUZUKI Shigeyuki (1972: 44) was probably the first to use the term in Japanese writing. He defined it as “the attitude of the speaker towards reality and the hearer”. Okuda (1985: 240) similarly used *modus* as the speaker’s expression of the relationship between sentence contents and reality; according to him, *modus* is obligatory for every sentence. The idea of the relationship of sentence contents to reality as a central part of modality is not home-grown in Japan. It goes back to Vinogradov’s writings in the 1940s and 1950s, and was expounded in detail in the Russian academy grammar of 1980 (cf. Kristophson 1994). Okuda and Suzuki were central members of the *Linguistic Study Group* (*Gengogaku Kenkyūkai*). This group, being oriented towards Soviet linguistics, only had outsider status within the social dynamics of the field of National Language Studies which has had a diametrically opposed political orientation. Their studies of Japanese language were ground-breaking but were hardly representative of the field, because they were shunned and until now have not earned full recognition.

In contrast, TERAMURA Hideo is a scholar who, although coming from English linguistics, in hindsight clearly formed part of the mainstream of Japanese linguistics. He is also the one scholar who had the most direct influence on Masuoka and Nitta. Teramura, in keeping with the Japanese tradition, espoused a bipartition of clause into objective and subjective elements, labeled as *koto* ‘things’ and *muudo* ‘mood’ respectively (Teramura 1982: 51). He further divided *muudo* into contents-oriented and hearer-oriented (Teramura 1982: 60). Probably the first person to use the very term *modariti* in the current sense of related to a bi-partition of clause was Nakau (1979). In the 1980s, a build-up towards the explosion of publications from 1989 on

is visible, including papers by Masuoka and Nitta. At this stage, the terms *muudo* ‘mood’ (Teramura) and *modariti* ‘modality’ (Nakau) still vary with each other. Conversely, the concept *chinjutsu* recedes into the background. Masuoka and Nitta, then, were the first to come up with the term *modariti* in major publications in Japanese (Nitta and Masuoka (eds.) 1989; Masuoka 1991; Nitta 1991), and the concept of modality they moulded at that time has become the model for most of the subsequent research that has been carried out within the domestic field of Japanese language studies (*nihongogaku*). An understanding of their concepts of modality is essential to an understanding of contemporary writing on modality in Japan. Masuoka’s and Nitta’s concepts are close but not identical and shall be introduced here concisely.

MASUOKA Takashi has the following basic view of modality: “Proposition and modality are the two big elements that make up a sentence. I define them as the element that expresses objective facts, and **the element that expresses subjective judgments and attitudes**, respectively”<sup>1</sup> (Masuoka 1991: 6; 2000: 87; highlighting added by author). This definition crucially refers to two factors. One is a bi-partition of sentence into proposition and modality, that is, basically a syntactic factor. The other is the identification of one part of the bi-partition with the expression of the speaker’s judgments and attitudes. This is a semantic-pragmatic factor. Research that builds on Masuoka thus has to assume that 1) every sentence can be divided into proposition and modality, and that there is a criterion (or criteria) for the division. Indeed, Masuoka originally named a whole set of criteria (interrogation, nominalization, past tense; Masuoka 1991: 34–36). 2) The dividing line between proposition and modality then coincides with a semantic division between objective and subjective sentence elements.

If this definition is taken seriously, the dividing line between proposition and modality becomes a crucial issue, and Masuoka has indeed repeatedly spent thought on this issue and revised his position (e.g. Masuoka 1987: 9; 1991: 34–36; 1999). Given the obvious fact that many linguistic expressions are neither clearly objective nor subjective he introduced the terms of ‘primary modality’ (*ichijiteki modariti*) for always subjective expressions and ‘secondary modality’ (*nijiteki modariti*) for expressions that can be both subjective and objective (Masuoka 1991: 36). For most researchers, however, Masuoka’s definition has only served as a starting point to investigate (and describe) a number of linguistic categories in Japanese which are saliently associated with some measure of subjectivity. Masuoka himself distinguished nine types of modality (Masuoka 1991: 47–59):

- 1) modality of speech attitude (incl. sentence-final particles etc.)
- 2) modality of politeness (incl. politeness markers)
- 3) expression pattern modality (refers to sentence mood)
- 4) modality of truth judgment (refers to epistemic modality)
- 5) modality of value judgment (refers to deontic modality)

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<sup>1</sup> All quotes from Japanese, German, and French are translated into English by the author.

- 6) modality of explanation (incl. the sentence nominalizer *no(-da)* and *wake*)
- 7) modality of tense (refers to tense)
- 8) modality of polarity (refers to negation)
- 9) modality of topic and focus (incl. topic- and focus-marking like *wa* etc.)

This is a fairly wide array of linguistic categories. Many of them, such as tense or topic and focus, in fact, would not be recognized as part of modality in most linguistic theories, but are recognized as grammatical categories in their own right. In contrast, dynamic modality (ability, circumstantial possibility, volition etc.), which is often viewed as part of modality in English and Western linguistics is, in keeping with the Japanese linguistic tradition, not viewed as modal. Masuoka later slightly revised his position and narrowed down somewhat the scope of modality. Specifically, in 1999, he shifted to complementation with *koto* as the dividing line between modality and proposition (Masuoka 1999: 47). This leads to the exclusion of at least tense and polarity from the list above. Overall, however, it is fair to say that researchers (primarily descriptive linguists) who are indebted to, or sympathize with, Masuoka's notion of modality have not been much concerned with the problematic aspects of, or the faithful application of this concept, but have rather focused on the aspect of subjectivity, and have concentrated on the description of categories which are at the core of other Japanese modality concepts as well.

NITTA Yoshio's concept of modality has been from the beginning narrower, more traditional, and more focused. He defines as follows: "Real typical modality is the **linguistic expression of the speaker's psychological attitude** towards the verbalized state of affairs or towards the utterance and the communication itself at the time of speech" (Nitta 1989: 34; cf. also Nitta 1989: 2, Nitta 2000: 81; highlighting added by author). In this definition we can find the same two elements of modality vs. something, and of subjectivity, but the idea of a bi-partition of the sentence is backgrounded, since in Nitta's view modality does not necessarily modify the proposition but can also modify an utterance, or even something else. Therefore, the element of subjectivity takes the spotlight.

However, modality as a syntactic component still plays a significant role for Nitta. He takes recourse to the most popular model of syntax in traditional Japanese linguistics, the layering model (e.g. Minami 1964, 1974), and locates modality in this model by dividing the sentence in Japanese into a layer of 'expressed situation' (*genpyō jitai*) and a layer of 'expressed attitude' (*genpyō taido*) (Nitta 1989, 1991). The sentence model is represented graphically as in Figure 1:

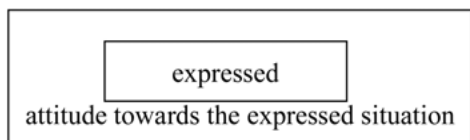


Figure 1: Modality in Japanese sentence structure, according to Nitta (1989:1)

The ‘expressed situation’ layer comprises the situation core and aspect, voice, and tense in addition. The ‘attitude’ layer consists of modality and politeness (Nitta 1991: 18). These layers roughly correspond to proposition and modality in models such as Masuoka’s. Furthermore, according to Nitta, a sentence is only formed when the proposition (expressed situation) is enwrapped by modality (Nitta 2000: 81). That is, modality is seen as an indispensable semantic element of sentence formation.

Since Nitta’s concept of modality is narrower than Masuoka’s, it is not surprising that he distinguishes fewer sub-categories. In fact, Nitta proposes two bi-partitions of modality, which do not exactly overlap with each other (Nitta 1989: 2, 34–40). First, he distinguishes ‘contents-directed modality’ (*genpyō jitai meate no modariti*) and ‘utterance/communication modality’ (*hatsuwa, dentatsu no modariti*). The former includes expressions of volition and desire on the one hand, and epistemic modality on the other hand (Nitta 1989: 41). The latter refers mainly to sentence moods, such as declarative, imperative etc. (Nitta 1989: 41). Secondly, he distinguishes ‘true modality’ (*shinsei modariti*), which can take no past tense, and no negation, and must always be associated with the first person (speaker) from ‘pseudo-modality’ (*giji modariti*). This distinction, which corresponds to Masuoka’s ‘primary’ vs. ‘secondary’ modality, is a consequence of the identification of modality with subjectivity. Presumably, past tense, negation, and non-first person signal a distancing from the speaker, and thus non-subjectivity. ‘True modality’ includes linguistic forms that are not subject to past etc. marking; e.g. imperative inflectional endings or the inferential *daroo*. ‘Pseudo-modality’ markers include most deontic and boulemic (volitional) modal expressions (Nitta 1989: 34–38).

In conclusion of the preceding two sections, it should have become clear that the mainstream concept of *modariti* in Japanese language studies is in fact the product of an original development. The biggest influences from outside were Sweet, Heyse, Wundt, and Bally. Their concepts were however not simply imported, but transformed in a way that would help Japanese scholars to formulate intuitions that they shared about their own language.

Furthermore, it should have become clear that *modariti* in Japanese language studies cannot be equated with *modality* in modern general linguistics. A different spelling appears to be not only justified but also appropriate. *Modariti* is the continuation of the ‘predication’ (*chinjutsu*) concept (Tokieda’s, not Yamada’s) formed within Japan. *Chinjutsu* is probably the most important concept in the history of Japanese grammar studies. As Onoe (2001: 265) writes, “one can say that grammar theory in National Language Studies was developed around the concept of and from the perspective of [*chinjutsu*]”. It started out from ‘predication’ in a general linguistic sense and developed into a concept of speaker subjectivity.

The current *modariti* concept is therefore a mixture of the concept of a grammatical category, namely one which supposedly serves the expression of the speaker’s attitude, and considerations about what makes a sentence a sentence. This view is



motivated by facts pertaining to Japanese language structure, where particles expressing the speaker's attitude and her or his orientation towards the hearer feature prominently. It is quite different indeed from most concepts of modality in general linguistics. Arguably, in English linguistics, consciously or unconsciously, the modals have served as the model, or the prototype, for the linguistic expression of modality. Japanese also has linguistic expressions that correspond to the modals, and at least some of them are also viewed as being part of *modariti*. However, it is the sentence-final particles, which modulate illocutionary force and regulate speaker-hearer interaction to which the Japanese main stream concept of modality applies best. Thus, there is a clear discrepancy between the focal points of *modariti* in Japanese scholarship and modality in general linguistics.

## 2.3 Alternative approaches

Ever since the new descriptively and practically-oriented movement that can be identified with the label of *Nihongogaku* 'Japanese language studies' started to grow in the 1980s, the traditional National Language Studies (*Kokugogaku*) has given way to this new field. However, individual scholars with a more explicitly tradition-conscious stance have remained influential. In their view, the descriptive approach that has nowadays practically monopolized the field of modality is theoretically dissatisfying, and superficial. ONOE Keisuke is a scholar who prominently not only has given a voice to such dissatisfaction, but who has also come up with an alternative model, namely that of *johōron* (modal theory; Onoe 2001, 2014). He is followed by some other scholars such as Kawamura (2002).

Onoe, in criticizing *modariti* theory, points out that the equation of modality with subjectivity is highly problematic. First, this use of the term modality is not compatible with 'modality' in general linguistics, and second it is impossible to divide linguistic forms into objective and subjective ones (Onoe 2001: 432, 445, 485). Also, *modariti-ron* is unable to systematically explain the polysemous behavior of modal markers which may have meanings stretching across different semanto-syntactic layers (Onoe 2001: 437–438, 483f; Onoe 2004: 51–52).

Onoe himself defines modality as "the meanings expressed by predicative forms (*jutteī keishiki*) that describe an irrealis state of affairs" (Onoe 2001: 454). Onoe's definition thus contains two major elements. The first is irrealis meaning. The idea that 'irrealis' is central to modality is not particularly common in Japanese linguistics, in contrast to general linguistics. Onoe in particular identifies himself with the Cognitive Grammar approach of Langacker, and Langacker indeed also shares the view that modality is defined by irrealis meaning.<sup>2</sup> The second element central to Onoe's

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2 "A modal indicates that the profiled process is not accepted as part of reality." (Langacker 2003: 12). The connection of modality with irrealis, instead of subjectivity, is also emphasized in Japanese linguists' interpretation of Langacker (cf. Tsuboi 2004: 247f).

definition, the ‘predicative forms’, are peculiar to Onoe’s theory, and are inspired by Yamada’s grammar, especially the complex endings (*fukugobi*). According to Onoe, these predicative forms correspond to certain basic types of predication (*nobekata*) and express various meanings in correlation to the syntactic position in which they are used. They can be identified with ‘mood’ in the Western sense (cf. Onoe 2001: 439). Crucially, while the mainstream approach sees modality as an element outside the proposition, wrapped around the proposition like layers of an onion, Onoe, in a shift back to Yamada’s idea of predication sees the locus of modality within the predicate, the auxiliaries (or complex endings) being part of the predicate.

Two scholars need to be mentioned here that in principle share the same critical stance towards the mainstream from a tradition-conscious perspective, but who in their argumentation remain independent of Onoe. Nomura (2003) critically focuses on the concept of subjectivity. He rejects the equation subjectivity=modality on the grounds that subjectivity is an epistemological and not a grammatical category. He thus maintains that subjectivity and modality are mutually independent categories. For him, there are both objective and subjective types of modality, which is defined as the expression of the relationship between sentence contents and reality (cf. also Nomura 2004). Ōshika (1999, 2004) views modality from the perspective of sentence formation. For him, epistemic modality lies at the core of the category, and he sees the possibility of interrogation as the most fundamental criterion for the classification of moods.

The scholars mentioned above all have one thing in common, namely that they see themselves in the tradition of Yamada and his predication theory, as opposed to the dominant Tokiedan approach. However, one can also take the opposite direction, and take the Tokiedan tradition of equating modality with subjectivity to its fullest consequence. This is what Maynard (1993) did when she coined the term ‘discourse modality’ and defined it as “the speaker’s subjective, emotional, mental or psychological attitude toward the message content, the speech act itself or toward his or her interlocutor in discourse” (Maynard 1993: 38). Final particles and discourse markers constitute the core of discourse modality. Maynard thus manages to solve the contradiction that mars the mainstream approach, which includes in its notion of modality both discourse markers and equivalents of modal verbs, mixing up a wide range of categories of various and unclear degrees of subjectivity.

Besides the mainstream in Japanese linguistics, and a smaller group of scholars who firmly identify themselves with the Japanese tradition but are critical of the mainstream, some scholars inside and outside Japan take a third stance by orienting themselves towards general linguistics. Some of this research will be cited in Section 3. One group of such scholars that has already been mentioned above but will not be taken up again in the following section, is the Linguistic Study Group (*Gengogaku Kenkyūkai*) who oriented themselves towards Soviet linguistics. With respect to modality, their tradition has been continued mainly by Hiroshi Kudō, who identifies himself less specifically with Soviet linguistics than with traditional European grammar in general (e.g. Kudō 1989, 2005) and Mayumi Kudō (e.g. Kudō 2004, 2006), who

presents herself as a direct successor to the linguistics of Okuda, but also takes into account recent research in English-language linguistics. The stance towards modality of Hiroshi Kudō and Mayumi Kudō is very similar. Both see modality as part of a broader concept of ‘predicativity’ (*chinjutsu-sei*), which also includes other categories such as temporality. They follow Vinogradov’s concept of modality as “the grammatical expression of the relationship between the sentence contents, reality, and the relationship [of the speaker] to the hearer from the speaker’s point of view”, as also adopted by Okuda (cf. H. Kudō 1989: 14; M. Kudō 2004: 3, 15). The central concern in this view of modality is the interface between grammatical form, semantic contents, and communication, which is found most saliently in different sentence types. Therefore, the notion of *chinjutsu*, in Yamada’s sense of what makes a sentence a sentence, or what integrates a sentence, is also highly relevant for this approach (cf. H. Kudō 1989: 16–17). Unlike the dominant approach to *chinjutsu* and *modariti* in the Tokiedan tradition, a broad range of lexical, syntactical, and morphological devices are identified with the expression of modality, including ‘objective’ modality (e.g. alethic and deontic modality; emotive expressions) and evidentials. Thus, in a sense different from the mainstream approach, the Kudōs also espouse a very broad view of modality, which is characterized primarily by its deliberate lack of distinction between grammar and pragmatics.

Lastly, it shall be mentioned here that especially the emergence of the Syntactic Cartography approach has led to an increase in interest in issues related to modality in generative grammar (e.g. Hasegawa 2008).

### 3 General linguistic and crosslinguistic conceptions of modality in relation to Japanese

The preceding section has highlighted the fact that the study of modality in Japanese linguistics, especially domestic Japanese linguistics, has a long tradition which has led to an approach to the field that is quite different from that in the West. The most common approach centers on the concept of ‘subjectivity’ in several guises on the one hand, and on ‘sentence-hood’ on the other hand. Since this approach is based on concepts that are very hard to grasp even in one language, its application as a crosslinguistic concept would pose major difficulties. This section now will present a number of more feasible possibilities to approach Japanese modality from a crosslinguistic or typological perspective.

#### 3.1 Modality in terms of possibility and necessity

In general linguistics, modality is most commonly dealt with semantically in terms of possibility and necessity, which is originally a concept of modal logic, and universally applicable to modal expressions in natural languages. States of affair that

are not factual can be classified as either possible or necessary. The possibility or necessity can be understood as relative to a specific conversational background, for example deontic (having to do with obligations on a participant), teleological (having to do with a participant's goal), boulomaic (having to do with a participant's intentions) or epistemic (having to do with the speaker's knowledge (cf. Narrog 2012: 8–11).

In Modern Japanese, for example the following markers and constructions can be identified (adverbs are ignored here) (cf. Narrog 2009: Ch. 10; the numbers become relevant at a later point):

**Table 1:** Modern Japanese expressions of possibility and necessity

	possibility	necessity
teleological-deontic	① <i>-Te=mo i-</i> -f=p A	② <i>-(a)na.kereba nar-ana-</i> -a+f V+a- ③ <i>=beki</i> =a
boulomaic		④ <i>-ta-</i> -a
speaker-internal/ circumstantial	⑤ <i>-(r)are-/-(r)e-</i> -v/-v- ⑥ <i>-(ur)u koto=ga deki-</i> -f N=p V-	<i>-(a)na.kereba nar-ana-</i> -a+f V+a-)
epistemic	⑦ <i>=ka=mo sir-e-na-</i> =p=p V+v+a-	⑧ <i>=ni tigai na-</i> =p V A ⑨ <i>hazu</i> N ⑩ <i>=daroo</i> =p

Table 1 does not show Modern Japanese modal markers in the verb cluster exhaustively, but it shows the most frequent and representative markers and constructions. On the basis of the table, the following major observations can be made:

- 1) There is a tendency for markers and constructions to cover a large range of conversational backgrounds. Therefore, some categories (teleological and deontic; speaker-oriented and circumstantial) could be merged in the table from the beginning. But the conflation of conversational backgrounds goes even beyond that; for example, *-(a)nakereba narana-* can at least cover teleological, deontic, speaker-internal and circumstantial backgrounds. In contrast possibility and necessity are always distinguished.

- 2) Possibility and necessity are not evenly covered, nor is the way specific forms cover specific conversational backgrounds parallel between possibility and necessity. As I pointed out throughout Narrog (2012), this is a common phenomenon crosslinguistically. Possibility and necessity are not parallel domains in terms of their expression in natural languages.
- 3) The markers and constructions represented in the table do not form a coherent set in terms of morphosyntactic properties, like the English modals, for example, do.

Additionally, a number of smaller observations can be made. For example, the above table does not distinguish for ‘strength’ of possibility and necessity. *Daroo* and *-ta-* are classified as ‘necessity’ here but they represent a ‘mid’-necessity covering ground between possibility and necessity. Furthermore, speaking of modality in Japanese, one should also refer to the group of evidential and epistemic-evidential markers (*soo*, *-soo*, *rasi-*, *yoo/mitai*; cf. Narrog 2009: Ch. 10.5). However, the description of evidentials in terms of possibility and necessity still stands on shaky feet.

The description of modality in terms of necessity and possibility that is so common in general linguistics is rare in Japanese linguistics (as exceptions one can name Yamada 1990 and Johnson 2003). Besides the general fact that Japanese linguistics in Japan has always been quite independent of (and at times, isolated from) general linguistics, one can also refer to fact 3) stated above, that Modern Japanese has no morphosyntactically coherent set of modal markers in terms of possibility and necessity. This has led to a sort of a shared understanding within the Japanese linguistic community that possibility and necessity are ‘imported’ notions that do not apply well to Japanese modality. This understanding is a little unfortunate because, as the short summary above shows, the possibility/necessity approach is descriptively entirely adequate and can lead to interesting observations about Japanese modality as well.

## 3.2 Mood vs. modal systems

Palmer’s (1986) book on modality and mood had an immensely stimulating effect on the study of modality crosslinguistically but suffered from a seemingly unsystematic treatment of the topic. In the second edition, Palmer (2001), the author tried to introduce two new concepts to improve the organization of his description. These were first the opposition of mood vs. modal systems, and secondly, the distinction of propositional vs. event modality. The second distinction becomes relevant again in Section 3.4, and so I will focus here on the first one. The terms are not properly defined but one can infer from Palmer’s description that mood refers to inflectional mood in a traditional sense, that is, a highly grammaticalized set of categories with a small number of distinctions, such as realis vs. irrealis or indicative vs. subjunctive

vs. optative, etc. In contrast, ‘modal systems’ are less grammaticalized and encode a much larger number of semantic and grammatical distinctions. The English modal verbs would be a paradigm example. Languages may have only one or both, and if they have both, one may be of much more importance, or more developed, than the other. Modern English, for example, would practically have only a modal system, while German would have both a modal system and mood (cf. Palmer 2001: 4).

If we apply this notion to Japanese, first of all, we can note that all those markers and constructions listed in Table 1 can be classified as part of the modal system.<sup>3</sup> In contrast, the inflections listed in Table 2 have a modal function and may be classified as moods.

**Table 2:** Modern Japanese mood inflections

Morphosyntactic function	Form	Semantics
Finite moods	–(r)u	unmarked (indicative)
	–(y)oo	intention/future
	–e/ro	imperative
Subordinating moods	–(r)eba, –Tara	conditional
	–Tari	exemplative
	–Te/–Ø	suspended

In contrast to the markers and constructions listed in Table 1, the morphemes here are morphosyntactically uniform in being inflections. However, they do not form a closed paradigm by themselves, but only together with other verbal inflections for tense etc., which are not listed here, since they have no obvious modal function. Furthermore, there are morphemes with similar functions that are not morphological inflections and therefore not listed in this table (e.g. the morpheme sequence –(r)u=to (–f=p)) as a conditional). Thirdly, there is no central obligatory mood contrast such as realis vs. irrealis or indicative vs. subjunctive. The unmarked –(r)u is simply unmarked and has no strong inherent realis or indicative meaning, since it can be (and is often) followed by morphemes that are ‘irrealis’ such as *daroo* or *hazu* in Table 1. Therefore, although Modern Japanese has modal inflections, they do not form a salient system of mood.

This was not always the case during Japanese language history. As I have pointed out in Narrog (2012; ch. 6.3.6), Japanese went through a phase in Middle Japanese where former markers had disappeared and most marked (irrealis) modal functions were expressed by just one mood inflection namely –(y)oo (and its variant –(y)ooz-). –(Y)oo also became obligatory in certain types of subordinate clauses, similar to the Spanish subjunctive, for example. The majority of the items listed in

<sup>3</sup> There have been attempts to classify *daroo* as mood, but for reasons stated in Narrog (2009: 138–9) I do not concur on this.

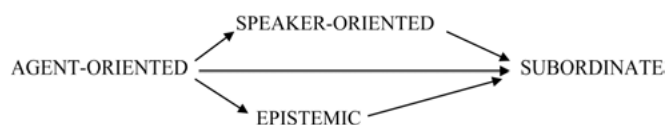
Table 1, especially the deontic and epistemic ones, developed relatively recently in Early Modern Japanese. Thus, Middle Japanese was the one phase in the historical development of the language that was closest to having a clear system of mood.

### 3.3 Modality's semantic map

Two major crosslinguistic and typological studies on modality were published in the 1990s. One was Bybee, Perkins, and Pagliuca (1994), and the other, Van der Auwera and Plungian (1998). Both are still foundational for the crosslinguistic study of modality. Bybee, Perkins, and Pagliuca (1994) reorganized the area of modality into four major subcategories, which are as follows:

- 1) Agent-oriented modality
- 2) Speaker-oriented modality
- 3) Epistemic modality
- 4) Subordinate modality

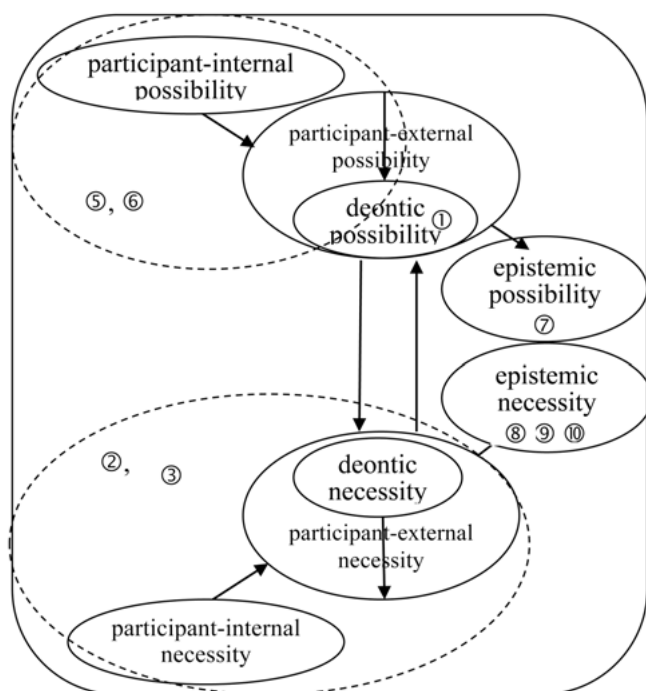
Under closer scrutiny, this categorization was not as revolutionary as it may look. Agent-oriented and epistemic modality correspond to the previously common categories of root and epistemic modality, and speaker-oriented and subordinate modality is basically a subcategorization of moods into deontic and subordinating ones. Nevertheless, it represented a bold integration of modality and mood into one system. Since Bybee, Perkins, and Pagliuca (1994) was written from the perspective of grammaticalization theory, the ultimate goal was to integrate various grammatical categories into a network of grammaticalization paths. The relationship between the four modal macro-categories represented above could then be represented as in Figure 2:



**Figure 2:** Paths of development for modalities (Bybee, Perkins, and Pagliuca 1994: 241)

Van der Auwera and Plungian (1998) based their research on the results in Bybee, Perkins, and Pagliuca (1994) and went one step beyond the grammaticalization paths presented by their predecessors by integrating the modal domains into one coherent 'semantic map', that is, a two-dimensional representation of the domain of modality and mood where spatial proximity reflects a hypothesis about semantic similarity, and where diachronic relationships can be rendered simultaneously as well. In terms of categories, they tried to narrow down modality to a core area, thus eliminating future or boulomaic modalities from their map. Those core categories

were further classified along three parameters, namely possibility vs. necessity, epistemic vs. non-epistemic (for both, see Section 3.1), and finally, participant-internal vs. participant-external, with deontic modality being a sub-category of the latter. The last of the three parameters is the most distinctive for van der Auwera and Plungian's approach. 'Participant-internal' "refers to a kind of possibility and necessity internal to a participant engaged in the state of affairs" (e.g. ability), and 'participant-external' "to circumstances that are external to the participant, if any, engaged in the state of affairs" (e.g. permission) (van der Auwera and Plungian 1998: 80). In Figure 3 below I present the area of modality on this map and indicate where the ten representative modal markers and constructions identified in Section 3.1 would be located on the map.



**Figure 3:** The possibility and necessity paths (van der Auwera and Plungian 1998: 98, 100, 104)

Although the map is sort of crowded, I hope that the match between the Japanese modal markers and the categories on the map, as I perceive it, is discernible. The investigation of the actual usage of each marker represented here may reveal an even broader usage of each item, but certainly not a narrower one.

Now, at least four observations can be made on the basis of this map. First of all, only in the area of epistemic modality are the correspondences between form and category neatly one-to-one. The fact that multiple markers correspond to one



category also points to the fact that there are more factors or parameters involved in the expression of Japanese modality than are provided in van der Auwera and Plungian's model. Second, as has been frequently observed, also by myself (Narrog 2009: Ch. 9, Ch. 10), overlap between epistemic and non-epistemic modal categories is almost non-existent in Japanese. Thirdly, in the area of non-epistemic necessity, there are specialized participant-external (as opposed to –internal) modal markers and constructions<sup>4</sup> but there are neither specialized participant-internal nor exclusively deontic markers.<sup>5</sup> Fourthly, in the area of non-epistemic possibility, there is a marker specialized on deontic possibility but there are none specialized on participant-internal vs. participant-external possibility. As there are neither specialized ability nor specialized participant-internal necessity markers, it seems that generally the ‘participant-internal’ category is grammatically not relevant for the description of Japanese modality.

### 3.4 Modality, the layered structure of the clause, and category hierarchies

Layered structures of the clause and category hierarchies both build on the observation that some forms and categories systematically take scope over others. This observation is shared in some functional and in formal theories of grammar. While the emphasis in formal theories is on syntax, even there the basis for scope relationships appears to be semantic (cf. Narrog 2012: 88). In this case, we have even an overlap with Japanese traditional grammar where the notion of ‘layer’ played a role already earlier than in the West, starting with the 1960s (cf. Narrog 2009: Ch. 4.3). These layers were originally not based on categories such as voice, tense, aspect, or modality but on individual linguistic forms and the observation of how they interact with each other. The modality scholars from the late 1980s on changed that and hypothesized that each layer can be singularly identified with a grammatical category, decisively with modality, or sub-categories of modality, forming the outermost layer(s), as represented in the template in (1):

- (1) [ [ [ [ [voice] aspect] polarity] tense] event modality] communicative modality/ politeness] (Nitta 1997: 142)<sup>6</sup>

The idea that one category forms one layer is quite daring, and as we will see below, empirically not tenable unless one imposes this template deductively on sentence

4 One could also add here the constructions *-(a)zaru=o ena-*, and *-(r)eba i-* (cf. Narrog 2009: ch. 10.1), which are both apparently limited to participant-external necessity and are not among the ten markers represented in Table 1 and on this map.

5 I cannot go into detail here but even *be-* can be used in a teleological or preferential sense.

6 Nitta labels epistemic modality as ‘judgmental mood’ (*handan no muudo*) and illocutionary force as ‘communicative mood’ (*dentatsu no muudo*). Some categories such as referent honorification, politeness, and root modality are not represented on this template.

structure by categorically labeling any item in a specific position according to this layering regardless of its actual semantics.

The important models of layering and category hierarchies in Western linguistics are more differentiated and do not assume an equation of specific categories with a whole layer. In functional models, specifically Role-and-Reference Grammar (Van Valin and LaPolla 1997) and Functional (Discourse) Grammar (e.g. Hengeveld and Mackenzie 2008), it is common to posit four or five layers, whereby individual subcategories such as aspect or modality are spread over two or sometimes even three or four of these layers, interlaced with other categories. In Generative Grammar, especially the Cartography approach (e.g. Cinque 1999, 2006), grammatical categories are very finely differentiated into subcategories, and a complex interweaving of modality with tense, aspect, and negation is hypothesized. Furthermore, unlike in Japanese grammar studies, universality of such layers and hierarchies is posited.

The claim for universality invites empirical testing of these hierarchies in any language, and also eventual comparison with other languages. In Narrog (2009), I tested most of the markers listed in Table 1<sup>7</sup>, and some more, for their scope properties in mutual interaction and in interaction with other categories such as tense, aspect, and negation. The results for the markers and constructions listed in Table 1 are shown in Table 3:

**Table 3:** Modal markers and constructions of Table 1 arranged by scopal behavior

Marker	Modal category	Layering with other modal markers	STATIC ASPECT	COMPL. ASPECT	INTERNAL NEG	EXTERNAL NEG	TENSE	NOMINALIZATION / COMPLEMENTA	ILLOCUTIONARY MODULATION	Layering in non-matrix clauses (Minami model)
–(r)are-	DYN	4	C D	C D	C D	C	C	C D	C	B
koto ga deki-	DYN	4	C D	C D	C D	C	C	C	C	B
–ta-	BOU	3b	C° D	C D	C D	C	C D*	C D	C	B
–(a)nakereba narana-	DEO	3b	C° D	C D	C D	C	C D*	C D	C	B
beki	DEO	3a	D	D	C D	C	C D*	C D	C	B~C
hazu	EPI	2	D	D	C D	C D	C D	C D	C	B~C
kamo sirena-	EPI	2	D	D	D	C D	C D	C D	C	B~C
daroo	EPI	1	D	D	D	D	D	C D	C	B~C

Symbols: C ‘takes scope under’; D ‘takes scope over’; – ‘no interaction’; \* ‘embedding is restricted to the counterfactual past’; ° ‘embedding only possible in a resultative reading’; DYN ‘dynamic’; BOU ‘boulomaic’; DEO ‘deontic’; EPI ‘epistemic’

<sup>7</sup> The study was corpus-based and I only included items above a certain threshold of frequency in the corpus. Therefore, I had to exclude *–Te mo i-* and *ni tigai na-* because they were not represented with sufficient frequency in the corpus (cf. Narrog 2009; ch. 14).

In Table 3, the markers and constructions are already arranged in a scope hierarchy. The columns show interaction with other modal makers, with other categories, and embedding in subordinate clauses (for details see Narrog 2009: Ch. 19). The scope properties form a continuum interlacing with other categories, rather than separate layers for each category, as posited by some authors in Japanese linguistics. As mentioned above, the ‘category=layer’ idea can only be saved if layers are applied deductively, that is, if for example, only items outside the scope of tense are declared as modal, as has been a common suggestion (cf. Section 2.2). In this case, only *daroo* is ‘modal’, and the other markers and constructions are not, whereby the problem arises of what, then, they actually are. Labeling them as ‘pseudo modality’, or only labeling actual uses of a marker that are not followed by a tense-aspect or negation morpheme as ‘modal’, as is common in Japanese linguistics, is not a convincing solution.

Thus, the results are in principle more compatible with theories of the layered structure of clause and category hierarchies in Western linguistics because there it is commonly assumed that categories spread across multiple semantic and/or syntactic layers, interlacing with other categories. However, there are even no clear cut-off points in this continuum that suggest distinct layers. Furthermore, the fact that many modal markers and constructions can take scope both over and under specific categories without changing their semantics is a fundamental problem for Cartography of Syntactic Structures, where every category must occupy a unique position.

Despite the universalist claim of layered clause structures and category hierarchies in general linguistics, the study on Japanese that I briefly discussed here is to my knowledge the only data study in any language systematically testing these claims. Studies on modal markers in other languages should follow up to make detailed crosslinguistic comparison possible.

### 3.5 Combining insights from grammaticalization approaches to modality with scope hierarchies

Based on insights from the grammaticalization research as partially introduced in Section 3.3, I developed a model of modality in Narrog (2005, 2012) that has the following two dimensions:

- 1) Volitive (e.g. deontic, teleological, boulomaic) modality vs. non-volitive (e.g. epistemic, circumstantial, participant-internal) modality
- 2) Event-oriented vs. speaker-oriented modality

Now, the claim is that while from the perspective of synchronic description, whether a category is volitive (e.g. deontic) or non-volitive (e.g. epistemic) is salient and may have various repercussions on the grammatical behavior of that item, from a

diachronic perspective it is the distinction of event-oriented vs. speaker-oriented that counts. Specifically, categories always change to become more speaker-oriented (or retain the same degree of speaker-orientation) but never become more event-oriented. Crucially, with respect to the category hierarchies discussed in Section 3.4, more speaker-orientation means a ‘climbing up’ in the category hierarchy (or the sentence layers) and never the reverse. For example, *-(r)are-* has historically extended from the category of voice to dynamic modality. Since voice is generally considered as lower than aspect and event-oriented (dynamic) modality, we expect this development to be unidirectional, that is, a modal category should not change into a voice category.

Since this is a relatively new hypothesis, more empirical research is needed to show to which extent this hypothesis actually holds.

## 4 Contrastive studies

In the preceding section, I explored possibilities of studying modality from a cross-linguistic or typological perspective. It should not go unmentioned, though, that there have also been contrastive studies between modality in Japanese and in specific other languages. Such contrastive studies can focus on practically any aspect of modality, and I will not discuss any such study here in any detail, but instead briefly mention here their existence. For comparison with English, the work by Sawada (e.g. Sawada 1993, 2006) may be representative, for comparison with Korean, the work by Horie and collaborators (e.g. Moriya and Horie 2009), and for comparison with Spanish the work by Wasa (2005) and Fukushima (this volume).

## 5 Conclusion

This chapter has offered and contrasted mainly two perspectives on Japanese modality – firstly, the concept of modality in a Japanese context as opposed to the study of modality in general linguistics (Section 2), that is, a perspective from ‘inside’ Japanese (domestic) linguistics, and secondly, a discussion of different crosslinguistic and typological approaches to the study of modality in Section 3, that is, a perspective from ‘outside’. In the mainstream of the ‘inside’ perspective, modality has been understood as the expression of speaker’s stance, and as the element completing a sentence (or an utterance), and in the ‘outside’ (Western) perspective as a grammatical category on a par with tense or aspect, mainly defined through reality status. The inside perspective may be best suited for description of categories on the illocutionary level like the sentence-final particles, while the outside perspective may be best suited for description of the traditional core categories of modality, such as expressions of

possibilities and necessities both on an epistemic and a non-epistemic (deontic, circumstantial etc.) level. Categories expressed by sentence-final particles in Japanese can be, and often are, covered under different category labels than ‘modality’, while in the inside approach, some core categories of the Western concept, such as ‘dynamic’ modality, are not covered. In this sense there is not much overlap between the two approaches, although the ‘inside’ approach also lays claim to covering some modal core categories, and the ‘speaker’s stance’ approach to modality is certainly not unknown in Western linguistics. I believe that in a comparative or crosslinguistic research perspective, the ‘outside’ concept of modality is more useful, but the ‘inside’ approach may also serve to highlight pragmatic elements in modal expressions that otherwise would tend to be neglected.

Overall, I hope that this chapter has served to foster knowledge and understanding of these different perspectives and may help to stimulate future research on Japanese modality from a crosslinguistic point of view.

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## 22 Modality in Japanese and Spanish

### 1 Introduction

Japanese and Spanish are different languages both genealogically and typologically, but in contrasting them, it becomes apparent that various phenomena in each language not easily observed through consideration of one alone are related to each other, leading to deeper analyses of both. Quite a number of contrastive studies of Japanese and Spanish have been conducted in Japan, including such works as Deguchi (1989), Kokuritsu Kokugo Kenkyujo (1994, 1997, 2000), Fukushima (2002a, 2013), and Wasa (2005). In this chapter we will focus on expressions of modality and show how research contrasting Japanese and Spanish contributes to a deeper understanding of both.

Modality expressions take very different forms in Japanese and Spanish. As shown in (1), together with expression of the concepts of surmise, probability, or necessity, which are expressed primarily using the category labeled auxiliary verbs, the speaker's mental attitude is expressed by means of sentence final particles like *yo* and *ne* in Japanese.

- (1) *Syatyoo wa kaigi ni syusseki*  
 company.president TOP meeting at attend  
*suru {daroo / sooda / hazuda} yo.*  
 do.PRS COP.PRS / hearsay.COP.PRS / expectation.COP.PRS SFP  
 'The president of the company {will probably attend / they say will attend / is expected to attend} the meeting.'

Research on "modality" has flourished regarding Japanese, which is rich in such auxiliary verbs and sentence final particles. Research in Spanish, on the other hand, has traditionally concentrated on indicative and subjunctive "mood" expressed in verb morphology and introduction of the term "modality" is comparatively recent. In general, indicative mood is used in a sentence conveying a fact while subjunctive mood is often used to express an event that has not occurred in reality, as in (2a). However, in actuality the subjunctive mood is also used to express reality, as in (2b).

- (2) a. *Dudo que Pedro haya venido.*  
 doubt.IND.PRS.1.SG COMP Pedro have.SBJV.PRS.3SG come.PP  
 'I doubt that Pedro has come.'
- b. *Me alegro de que Pedro haya venido*  
 be glad.IND.PRS.1.SG of COMP Pedro have.SBJV.PRS.3SG come.PP  
 'I am glad that Pedro has come.'

Through the application of the highly abstract concept of “modality” to research on Spanish, and application of the fruits of research in Japanese to the analysis of “mood” in Spanish, we can expect to furnish a new perspective on problems within Spanish. At the same time, it is also possible that some of the concepts introduced in the analysis of mood in Spanish will expose new characteristics of Japanese modality.

This chapter is organized as follows. Preliminary to a comparison of concrete phenomena in Japanese and Spanish, Section 2 provides a brief overview of how modality is realized in the two languages. Sections 3 and 4 present specific cases of Spanish-Japanese comparison in two directions: contribution from Spanish to Japanese and contribution from Japanese to Spanish. Section 5 concludes the chapter.

## 2 Types and realizations of modality in Japanese and Spanish

This section provides an overview of previous research and outlines the systems of modality expressions in Japanese and Spanish. The terms “modality” and “mood” are similar, but fundamentally the former refers to semantic concepts showing the speaker’s mental attitudes relating to illocutionary force, such as “statement”, “question”, “exclamation”, or “command” while the latter refers to the concrete linguistic forms by which those semantic concepts are expressed. Thus, what linguistic form (mood) is used to express what modality concept is one way of comparing multiple languages.

As touched upon in Section 1, since mood as realized in inflectional forms of the verb is deeply related to modality in Spanish, the topic that has received the most attention in the literature on Spanish is the different functions of mood. As shown in Table 1, the difference between the two representative moods, indicative and subjunctive, depends on the type of clause, independent or subordinate, in which the verb carrying the form appears. Arranging the forms and uses by how indicative and subjunctive moods appear in each clause type and the type of modality expressed by the mood that appears yields Table 1, which shows general patterns. In Table 1, adapted from Fukushima (1999), “semi-independent sentence” refers to clauses that are complements to adjectives and adverbs. As shown in Table 1, statement modality corresponds directly with indicative mood and, although indicative mood does appear in modalities other than statement modality, the involvement of subjunctive mood in non-statement modality is much stronger. In terms of clause type, in independent sentences other than commands, indicative mood appears exclusively and in non-independent sentences the subjunctive mood appears widely.

**Table 1:** Correspondence between modality and mood in Spanish

	Statement modality	Interrogative modality	Exclamative modality	Command modality
Independent sentence	indicative	indicative	indicative	subjunctive
Semi-independent sentence	indicative	indicative/ subjunctive	indicative/ subjunctive	subjunctive
Nominal clause	indicative	—	subjunctive	subjunctive
Adjectival clause	indicative	subjunctive	—	—
Adverbial clause	indicative	subjunctive	—	subjunctive

However, even in Spanish it is not just the mood of the verb that is involved in the expression of modality. Just as modality in Japanese is expressed by a variety of categories including verbal conjugation, auxiliary verbs, sentence final particles, and adverbs, in Spanish as well characteristics of modality can be found in categories other than the mood of the verb. Arranging the types of modality and the forms by which they are expressed in Japanese and in Spanish in a form that allows comparison between them yields Table 2. The author compiled Table 2 adducing Spanish examples corresponding to the discussion of Japanese in Nitta (2014: 629–633).

**Table 2:** Types of modality in Japanese and Spanish and the forms by which they are expressed

Types of modality	Japanese	Spanish
modality of utterance and communication	directive (imperative form of verb, etc.) question ( <i>ka</i> , etc.) statement (conclusive form of verb, etc.) volition (volitional form of verb, etc.) exclamation ( <i>nante~daroo</i> ‘what a ~ it is’, etc.)	order (imperative mood, etc.) question (word order, intonation, etc.) statement (indicative mood, etc.) volition (auxiliary verbs, etc.) exclamation (intonation, etc.)
evaluative modality	evaluation of necessity (constructions like: <i>~nakerebanaranai</i> ‘must ~’, <i>~bekida</i> ‘ought to ~’, <i>~zaruoenai</i> ‘cannot help but ~’, etc.) judgmental evaluation (adverbial ele- ments like: <i>saiwai.ni.mo</i> ‘fortunately’, <i>zannen.na.koto.ni</i> ‘unfortunately’, etc.)	evaluation of necessity (auxiliary verb <i>deber</i> ‘must’, auxiliary verb phrase <i>tener que</i> ‘have to’, subjunctive forms in noun phrases, etc.) judgmental evaluation (sentence adverbs like <i>afortunadamente</i> ‘fortunately’, etc., subjunctive forms in noun phrases, etc.)
epistemic modality	hearsay ( <i>~soo.da</i> ‘they say ~’, etc.) doubt ( <i>kana</i> ‘I wonder’, etc.) conclusion (unmarked expression) supposition ( <i>~daroo</i> ‘it is probably ~’, etc.)	hearsay (verb phrase, etc.) doubt (adverbs like <i>quizás</i> ‘perhaps’, indicative or subjunctive forms in noun phrases, etc.) conclusion (indicative) supposition (auxiliary verbs like <i>poder</i> ‘may, can’, etc.)

In research on modality in Japanese, topics like the respective functions of auxiliary verbs and sentence final particles, the hypothesized functions of various kinds of modality, and the mutual relations between them have drawn considerable attention. In contrast, in research on Spanish the categories of modality of utterance and communication and the role of modal auxiliary verbs have been the main targets of discussion.

### 3 Contribution to Japanese from Spanish

In Section 2 we briefly described modality in Japanese and Spanish and the forms in which it is expressed. In this section we will describe how research on Spanish contributes to understanding modality in Japanese and in Section 4 we will explain how the perspective of research in Japanese contributes to an understanding of modality in Spanish.

Wasa (2005) is a perceptive study of Japanese modality from the Spanish perspective that analyzes the Classical Japanese auxiliary *mu* incorporating results from Spanish studies. The basis for her argument is introduced in Wasa (1999). Wasa claims that the Spanish subjunctive conveys the modality of “epistemic reserve”, i.e. that the speaker does not declare whether he is judging if the matter expressed in the content is true or not.

- (3) [<sub>Epis.M</sub> *Es seguro* [<sub>Epis.M</sub> *que viene*]]  
       is sure                   COMP come.IND.PRS.3SG  
       ‘It is sure that he is coming.’
- (4) [<sub>Epis.M</sub> *Es probable* [<sub>M.Reserve</sub> *que venga*]]  
       is probable                   COMP come.SBJV.PRS.3SG  
       ‘It is probable that he will come.’
- (5) [<sub>Eval.M</sub> *Siento*                                   [<sub>M.Reserve</sub> *que no venga*]]  
       feel.sorry.IND.PRS.1SG                   COMP NEG come.SBJV.PRS.3SG  
       ‘I feel sorry that he doesn’t come.’  
       (Epis.M: epistemic modality. M.Reserve: modality of epistemic reserve.  
       Eval.M: evaluative modality) (Wasa 1999: 126)

(3) employs the indicative verb *viene* ‘comes’ in its complement clause because it is affirmative in epistemic modality, whereas (4) exploits the subjunctive verb *venga* in the subordinate clause because it only expresses probability. The uncertainty of the truth of the proposition triggers the use of the subjunctive to reserve the decision on the truth of the embedded clause. Now in (5), the subjunctive *venga* is used because the main clause expresses an evaluative modality, supported by the

proposition of the subordinate clause, and this suspends the truth judgment of the speaker with regard to the content.

Wasa (2005: 186–187) claims that modality of epistemic reserve is not only effective in describing the Spanish modal system but also in comprehending the polysemy of some auxiliary verbs, namely, *(y)oo*, *daroo*, in Modern Japanese and *mu* in Classical Japanese.

Suffixed to a verb, these auxiliary verbs are generally considered to be polysemous words expressing variously the speaker's supposition, volition, cohortation, or concessive judgement concerning the content. Wasa observes the correlation seen below in (6a) and (6b) and in (7a) and (7b) between these auxiliaries and the Spanish subjunctive.

- (6) a. *Tonikaku suwar-oo.*  
           anyway sit-COHORT  
           'Now let's sit down.'
- b. *Por ahora sentémonos.*  
           for now sit.SBJV.PRS.1PL  
           'Now let's sit down.'
- (7) a. *nani ga okor-oo to (mo)*  
           what NOM happen-CONCESS if (even)  
           'whatever may happen'
- b. *pase lo que pase*  
           happen.SBJV.PRS.3SG ART REL happen.SBJV.PRS.3SG  
           'happen what may happen'  
           (Wasa 2005: 181, 183)

In (6a), the modal *(y)oo* serves as a cohortative to invite the hearer to sit down with the speaker. In (7a), the same modal represents a concessive in combination with the subordinator *to (mo)* 'even if'. As shown by (6b) and (7b), Spanish calls for the subjunctive in these cases because the irrealis meaning of the cohortative and concessive matches the modality of epistemic reserve conveyed by the subjunctive. This differentiation led Wasa to conclude that the polysemy of the predicate final modal form *(y)oo* in Present-day Japanese may be reduced to a single basic function: expressing the modality of epistemic reserve. However, although the various uses of *(y)oo* diachronically stem from a single form, it is generally said to be difficult to group them all together in a single form synchronically in Present-day Japanese.

Wasa (2005: 172–179) further claims that the same distinction should apply to the auxiliary verb *mu* in Classical Japanese. This auxiliary has also traditionally been considered to express a variety of meanings, including supposition, volition,

and unreality. In (8a), *mu* expresses supposition, and in (9a) the non-realization of the event. These and other meanings of *mu* are integrated in the modality of epistemic reserve. The fact that the Spanish translations of these sentences exploit the subjunctive mood supports Wasa's hypothesis.

- (8) a. *Sayooni kikosimesu bakari ni wa arazu ya habera mu.*  
 in.such.a.way listen just DAT TOP NEG POT be CONJEC  
 'Perhaps it might be no use listening to her in such a way.'
- b. *Acaso no valga la pena escucharla.*  
 perhaps NEG value.SBJV.PRS.3SG ART pain listen.to.her  
 'Perhaps it might be no use listening to her.'  
 (Murasaki Shikibu, *Genji Monogatari* or *The Tale of Genji*, 11c. Wasa 2005b: 172)
- (9) a. *Tuki no idetara mu yoru wa miokose tama-e.*  
 moon NOM go.out IRR night TOP look.up.at HON-IMP  
 'On a moonlit night, please look at the moon.'
- b. *Las noches en que haya luna, miradla.*  
 ART nights in REL be.SBJV.PRS.3SG moon look.IMP.at.it  
 'On a moon lit night, look at it.'  
 (Anonymous author, *Taketori Monogatari* or *The tale of the bamboo cutter*, 9–10c?. Wasa 2005: 175)

Wasa's proposal thus shows that the new type of modality of utterance, called "modality of epistemic reserve" in Spanish linguistics, contributes to a deeper understanding of Classical Japanese.

## 4 Contribution to Spanish from Japanese

There is a considerable quantity of research from the perspective of Japanese that has improved understanding of modality in Spanish. Below are some examples of the kinds of new insights such research can provide.

### 4.1 Hierarchical structure of modality and proposition

Fukushima (1978) was the first attempt to contribute to the analysis of Spanish modality from the viewpoint of Japanese, and his major findings since then are summarized in Fukushima (1990a). Fukushima proposed to clarify the structure of Spanish modality through application to the Spanish mood system of the view that

has become clear in domestic research on Japanese modality as having a hierarchical structure.

A Japanese sentence is divided into a part that expresses the proposition and a part that expresses the modality and the idea that they form a hierarchical structure has been proposed by many researchers including Minami (1974) and Teramura (1984); the proposals made in the years up to 1991 are compiled in Masuoka (1991). According to Masuoka (1991), modality is defined as “forms that express matters directly related to the subject making and expressing judgements” (Masuoka 1991:30) and the proposition as “the element that expresses matters perceived objectively” (Masuoka 1991: 33). These two major constituents form a sentence with the proposition located below modality hierarchically. Masuoka further subdivided modality into “expression-related modality” at the top of the hierarchy, “primary judgement modality” at the next lower level, and “secondary judgement modality” below that. Each level of modality is composed of concord elements and nuclear elements, the former appearing before the proposition and the latter after. That is, in general a sentence has the structure shown in (10a). (10b) is a concrete example adduced by Masuoka. For a more detailed introduction to research on modality in Japanese and hierarchical structure, the reader is referred to Narrog (this volume).

- (10) a. [M1<sub>concord element</sub> [M2<sub>concord element</sub> [M3<sub>concord element</sub> [P]  
           M3<sub>nuclear element</sub>] M2<sub>nuclear element</sub>] M1<sub>nuclear element</sub>]
- b. [M2 *Tabun* [M3 *kanarazusimo* [P *mina sansei si-*]<sub>M3</sub> *nai*]<sub>M2</sub> *daroo*]  
       perhaps not always all agreement do NEG CONJEC  
       ‘Perhaps not all will agree.’  
       (M1: expression-related modality, M2: primary judgement modality,  
       M3: secondary judgement modality, P: proposition (Masuoka 1991: 43).  
       The original was presented as a tree diagram, but the author converted the  
       representation to the bracketed representation above.)

Fukushima (1990a), building on the proposal of Masuoka (1991), made the proposal for Spanish that, as shown in (11), even in a subordinate clause the indicative mood occupies the same high location in the hierarchy as in a main clause and that the subjunctive occupies a lower modality position in the hierarchy, adjacent to the proposition.

- (11) a. [M1 main clause + subordinate clause in indicative mood [ P ] ]  
       b. [M1 main clause [M2 subordinate clause in subjunctive mood [ P ] ] ]

- (12) a. [M1 *Creo*                                    *que viene*                                    *María*].  
           think.IND.PRS.1SG COMP come.IND.PRS.3SG. Maria  
           ‘I think Maria is coming.’

- b. [<sub>M1</sub> *Deseo* [<sub>M2</sub> *que venga María*]].  
 desire.IND.PRS.1SG COMP come.SBJV.PRS.3SG Maria  
 'I hope Maria comes.'
- c. [<sub>M1</sub> *Me alegre de* [<sub>M2</sub> *que venga María*]].  
 REFL please.IND.PRS.1SG of COMP come.SBJV.PRS.3SG. Maria  
 'I am glad that Maria is coming.'  
 (M1: hierarchically high modality, M2: hierarchically low modality,  
 P: Proposition) (Adapted from Fukushima 1990a: 169)

According to Fukushima (1990a), the speaker of (12a) affirms the content of the subordinate clause, which contains the main information of the sentence. On the other hand, *creo* '(I) think' is not stressed when pronounced with an unmarked intonation, and it has no more than a parenthetical value. As for (12b), he notes that Maria's coming is just a hope conceived by the speaker and is not assured to become true. *Deseo* 'I hope' is the main clause of the sentence syntactically as well as semantically, and *que venga María* 'that Maria comes (subjunctive)' is almost an imaginary proposition. The speaker in (12c) wants to express his joy. He is not interested in reporting the news of Maria's coming, recognizing it, even so, as a truth.

In this way, Fukushima (1990a) introduced ideas developed in studies of Japanese modality to Spanish and proposed that a hierarchical structure was realized for Spanish modality as well. Below we will explain how hypothesizing this sort of hierarchical structure allows us to capture phenomena that have been overlooked in previous research on Spanish.

## 4.2 Mood in double embedding structures

Fukushima (1990a) presents a number of linguistic phenomena in Spanish as evidence in support of the validity of the hierarchical structure of Spanish modality. We will present three of these phenomena here. First, Fukushima's assumption of a hierarchical structure is supported by its usefulness in the analysis of "super main clauses", or structures with double embedding, as shown in (13a, b).

- (13) [<sub>C1</sub> *Me llama la atención*  
 me catch.IND.PRS.3SG ART attention  
 [<sub>C2</sub> *que afirme* [<sub>C3</sub> *que*  
 COMP affirm.SBJV.PRS.3SG COMP  
*en Cataluña* {(a) *se encuentran* /  
 in Catalonia REFL find.IND.PRS.3PL



- (b) se      *encuentren*}      *cinco de entre*  
 REFL find.SBJV.PRS.3PL five of among  
*los diez mejores restaurantes de España*]].  
 ART ten best restaurants of Spain  
 ‘It catches my attention that he affirms that in Catalonia there are five of  
 the ten best restaurants in Spain.’  
 (C1: the highest clause; C2: the middle clause; C3: the lowest clause)  
 (Fukushima 1990a: 171)

Basically, the mood is controlled by the predicate of the clause of the immediately higher level. In (13a), for example, *llamar la atención* ‘catch attention’ puts the immediately subordinate verb *afirmar* ‘affirm’ in the subjunctive, and this verb, in turn, determines its immediate subordinate *encontrarse* ‘to be found’ be in the indicative form. This chain of local domains is sometimes violated, as shown in (13b), where the verb form of the lowest clause is determined not by the predicate of the middle clause but by the mediating and highest clause, or the “super main clause”. Interestingly, this violation occurs only when C1 triggers subjunctive and C2 indicative. When C1 triggers indicative and C2 calls for subjunctive, this phenomenon is not observed. Fukushima called this violation the “super main clause phenomenon”.

As a result, the syntactically lowest clause C3 provides an ideal condition for the subjunctive, a mood with a low degree of modality. It is natural that the speaker is inclined to use subjunctive in C3, forgoing the general rule of local domain subordination. Indeed, it is not probable that the speaker would violate this rule by using the indicative, a mood with a high degree of modality, in such an unsuitable environment as C3.

These proposals by Fukushima have been accepted and introduced by Spanish researchers outside of Japan. Primary among them are, Porto Dapena (1991), Cabeza Pereiro (1997), Mackenzie (1999), Zamorano Aguilar (2001, 2005), Grande Alija (2002), Hummel (2004), Busch (2009), and Bosque (2012). In the official descriptive grammar of the Royal Academy of Spain, Bosque and Demonte (eds.) (1999: I, 3244–3246), the examples given in Fukushima (1990a) of double embedding and the term “super main clauses” are adopted as is. In addition, in the official prescriptive grammar of the Royal Academy of Spain and Association of Academies of Spanish Language, RAE and AALE (2009: I, 1913–1916), the phenomenon of “super main clauses” influencing the mood of verbs pointed out in Fukushima (1990a) is explained in detail under the rubric of “unexpected use of subjunctive mood” following on the whole the explanation given by Fukushima.

However, since Bosque and Demonte (eds.) (1999) and Hummel (2004) present criticisms of these proposals, we will first present their arguments and then offer counter arguments. First, Bosque and Demonte (eds.) (1999: I, 3245) claim, “if the

mood in a situation of double embedding is determined by high or low modality as Fukushima says, then in a sentence like the following the super main clause should call for the subjunctive mood, but in actuality the acceptability is low”, and they offer the following example.

- (14) [<sub>C1</sub> *Manda* [<sub>C2</sub> *observar* [<sub>C3</sub> *que*  
 order.IND.PRES.3SG observe.INF COMP  
*haya venido el médico de guardia* ] ] ].  
 come.SBJV.PRSPERF.3SG ART doctor of guard  
 ‘(S)he tells us to see if the doctor on duty has come.’  
 (Bosque and Demonte (eds.) (1999: I, 3245))

The following counter argument can be made to this criticism. First, Fukushima did not claim that subjunctive would always appear in the environment of double embedding. He very clearly stipulated the condition “when the predicate of the super main clause expresses emotion or negation”. The predicate in (14) *mandar* ‘order’ is a verb that calls for the subjunctive, but it is a predicate expressing volition and does not fit the condition stated above. Accordingly, it is not a problem that the super main clause phenomenon does not arise. Secondly, even if the verb of the embedded clause *haya venido* ‘has come’ is changed to the indicative mood *ha venido*, the acceptability remains low and thus the example is not strong evidence for overturning Fukushima’s proposal.

Next, Hummel (2004: 188–189), who considers mood itself to bear meaning, criticizes Fukushima’s explanation of double embedding saying, “absorbed in the idea that external elements determine mood, it overlooks the expressivity that mood itself carries.” The following counter argument can be made to this criticism. First, while it is not impossible to explain the phenomenon of the lowest clause of (13) appearing in the subjunctive from the standpoint of the subjunctive itself carrying some sort of meaning, this would lead to explaining each actually occurring example on a case-by-case basis; consideration of the effects of the super main clause allows a more productive explanation. Secondly, if we explain the super main clause phenomenon as Hummel does as an “appearance of the expressiveness of the subjunctive”, explanation of unmarked mood selection under local governance in an example like (15) in which the super main clause phenomenon does not occur becomes impossible. That is, if one applies the same explanation to (15) as to (13), the subjunctive form *desee* ‘desire.SBJV’ would have to be selected. While the expressiveness of mood should not be ignored, we should adopt a methodology based on objective evidence and recognize that syntactic structure also contributes to mood selection. These counter arguments appear in Fukushima (2001) and Fukushima (2006). Consideration of the deeper question of why it is that occurrence of the super main clause phenomenon is limited to “cases in which the predicate of the main clause expresses emotion or negation” is still open.

- (15) [C<sub>1</sub> *Quiero* [C<sub>2</sub> *que sepa usted*  
 want.IND.PRS.1SG COMP know.SBJV.PRS.3SG you  
 [C<sub>3</sub> *que {deseo / \*deseo}*  
 COMP desire.IND.PRS.1SG desire.SBJV.PRS.1SG  
*cambiarla a otro departamento* ] ] ].  
 change.INF-you to other section  
 'I want you to know that I'd like to change you to other section.'

### 4.3 Tag questions and parentheticals

Fukushima (2000) attempts to develop his previous assumption with the aid of Minami's (1974) theory. Minami classifies subordinate clauses by their degree of independence (clauses with potential for independent sentences and prototypically dependent clauses: see Narrog (this volume) for more detail). Fukushima claims, first, that Spanish has two types of subordinate clauses based on differences of modality, i.e. one with high degree of modality of utterance and communication and one that lacks it, and second, that indicative is used in the former type and subjunctive in the latter.

Fukushima (2000) examines the grammaticality of various kinds of constructions that may serve as support to his hypothesis: tag questions, parentheticalization and dislocation of main clauses, and subordinate clauses led by syntagms such as *de ahí que* 'hence', *aunque* 'though', etc. Here let us examine briefly the cases of tag questions and parentheticalization.

- (16) a. *Creo que van a*  
 think.IND.PRS.1SG COMP go.IND.PRS.3PL to  
*bailar la contradanza {zero. / , ¿no?}*  
 dance.INF ART contradance right?  
 'I think they are going to dance the contradance {zero. / , right?}'
- b. *Me doy cuenta de que*  
 REFL give.IND.PRS.1SG notice of COMP  
*van a bailar la contradanza {zero. / , ¿no?}*  
 go.IND.PRS.3PL to dance.INF ART contradance right?  
 'I notice they are going to dance the contradance {zero. / , right?}'
- c. *Me interesa que vayan*  
 me interest.IND.PRS.3SG COMP go.SBJV.PRS.3PL  
*a bailar la contradanza {zero. / \*, ¿no?}*  
 to dance.INF ART contradance right?  
 'I am interested in that they are going to dance the contradance  
 {zero. / , right?}'

- d. *Dudo* *que* *vayan* *a*  
 doubt.IND.PRS.1SG COMP go.SBJV.PRS.3PL to  
*bailar* *la* *contradanza* {<sub>zero</sub> / \*, ¿no?}  
 dance.INF ART contradance right?  
 ‘I doubt they are going to dance the contradance {<sub>zero</sub> / , right?’  
 NB: “zero” = null form)  
 (Fukushima 2000: 195–196)

Sentences (16a, b, c, d) are all well-formed without the tag question marker ¿no?, but when this is added, they differ in terms of grammaticality. The sentences with indicative in their subordinate clause tend to remain grammatical, and the sentences with subjunctive become ungrammatical. According to the hypothesis, the subordinate clauses of the sentences that allow tag question formation play the main role in the sentence, as far as information is concerned, and enjoy a high degree of independence in spite of being subordinate syntactically. That accounts for the difference of grammaticality between sentences in the indicative and those in the subjunctive.

- (17) a. {*Creo* / *Se dice* / *Me*  
 think.IND.PRS.1SG REFL say.IND.PRS.3SG REFL  
*doy* *cuenta de*} *que el nuevo*  
 give.IND.PRS.1SG notice of COMP ART new  
*gerente es muy exigente.*  
 manager be.IND.PRS.3SG very strict  
 ‘{I think / It is said / I notice} that the new manager is very strict.’
- b. {*Lamento* / *Dudo* / *Quiero*  
 regret.IND.PRS.1SG doubt.IND.PRS.1SG want.IND.PRS.1SG  
*que el nuevo gerente sea muy exigente.*  
 COMP ART new manager be.SBJV.PRS.3SG very strict  
 ‘{I regret / I doubt} that the new manager is very strict. / I want the new manager to be very strict.’
- c. *El nuevo gerente*, {*creo* / *se*  
 ART new manager think.IND.PRS.1SG REFL  
*dice* / *me doy* *cuenta*},  
 say.IND.PRS.3SG REFL give.IND.PRS.1SG notice  
*es muy exigente*  
 be.IND.PRS.3SG very strict  
 ‘The new manager, {I think / it is said/ I notice}, is very strict.’

- d. *El nuevo gerente, {? lamento*  
 ART new manager regret. IND.PRS.1SG  
 / \**dudo* / \**quiero*},  
 / doubt.IND.PRS.1SG / want. IND.PRS.1SG  
 {*es* / *sea*} *muy exigente.*  
 be.IND.PRS.3SG be.SBJV.PRS.3SG very strict  
 ‘The new manager, [I regret / I doubt], is very strict. / The new manager,  
 – I hope he is very strict.’  
 (Fukushima 2000: 197–198)

Sentences (17a, b) are changed into (17c, d) respectively if we put their main clauses in a parenthetical position. Again, the sentences with the indicative in subordinate clauses accept this change, while the sentences with subjunctive resist it whether we use *es* ‘is (indicative)’ or *sea* ‘is (subjunctive)’ in the main clause. If we assume that the subordinate clauses of this second group are highly dependent and have a low degree of independence and sententiality, this phenomenon can be easily explained.

#### 4.4 Mood in factive appositive clauses

The third advantage to Fukushima’s hypothesis is that it can correctly predict mood selection in appositive clauses of the form *el hecho de que...* ‘the fact that ...’ with *hecho* ‘fact’ as the head noun (henceforth, “*hecho* clauses”).

*Hecho* clauses are known for the fact that, in spite of taking a head that means “fact”, they take the subjunctive mood. Because of this idiosyncrasy, *hecho* clauses have long drawn the attention of researchers and a number of explanations have been tried. One explanation proposed was that “the subjunctive is formally inserted into such clauses regardless of the original meaning of the subjunctive”. However, given that in actuality not only the subjunctive mood but also the indicative are used, this explanation is untenable. Another claim is that “in this construction the meaning difference between subjunctive and indicative moods is neutralized and they appear in free variation”. However, in the surveys of Fukushima (1990b, 2002b), it was found that the use of the indicative and of the subjunctive in a *hecho* clause are clearly distinguished.

With the cooperation of other researchers, Fukushima conducted a survey of native speakers based on the following actually occurring examples.

(18) Speaker A:

*Yo ni siquiera sé dónde está ese golfo.*  
 I NEG even know.IND.PRS.1SG where be.IND.PRS.3SG that gulf  
 ‘I even don’t know where the gulf is.’

Speaker B:

*El hecho de que no* {(a) *sabes* /  
the fact of COMP NEG { know.IND.PRS.2SG /

(b) *sepas*} *dónde está,*  
know.SBJV.PRS.2SG} where be.IND.PRS.3SG

*no quiere decir que no exista.*

NEG want.IND.PRS.3SG say.INF COMP NEG exist.SBJV.PRS.3SG

‘The fact that you don’t know where it is does not mean that it doesn’t exist.’

(Adapted from the weekly magazine *Cambio* 16, 980, Sept. 3, 1990, p. 114, Madrid)

- (19) *Quisiera llamar la atención sobre*  
want.SBJV.PAT.1SG call.INF ART attention on

*el hecho de que en Finlandia la libertad*  
ART fact of COMP in Finland ART freedom

*de prensa* {(a) *está* / (b) *esté*}  
of press be.IND.PRS.3SG / be.SBJV.PRS.3SG

*garantizada en la legislación.*

guarantee.PP in ART legislation

‘I’d like to call your attention to the fact that in Finland the freedom of the press is guaranteed by the legislation.’

(Adapted from the weekly magazine *Cambio* 16, 575, Dec. 6, 1982, p. 15, Madrid)

(18) presents a pair with indicative and subjunctive, the original version being (18b), that is the version with the subjunctive in the *hecho* clause. In spite of the fact that it is true from the utterance itself that the first speaker does not know where a certain gulf is, the second speaker chooses the subjunctive mood to express “the fact that you do not know where that gulf is”. In contrast, in (19) the original version is (19a) with the indicative used in the *hecho* clause.

This mood selection is not due to an individual or arbitrary choice by the original speaker. Fukushima participated in a survey conducted together with Takagaki and others in Spain with 186 ~ 188 native speaker respondents asking for their judgements on these sentences. The respondents were asked to choose among three choices: A. I have heard this type of expression and I myself use it; B. I don’t use this type of expression, but I have heard others use it; C. I don’t use this type of expression nor have I heard others use it. The results from the survey are presented in Table 3.

**Table 3:** Native speaker reactions to mood selection in *hecho* clauses

	Informants who chose A	Informants who chose B	Informants who chose C	Total
(18a) indicative	28	107	51	186 (101)
(19a) indicative	141	37	9	188 (31)

Numbers indicate the number of respondents choosing each alternative. The numbers in the parentheses in the Total column show the number of respondents who answered, in addition to the choices A, B, or C, either “It would be better to use the subjunctive in this sentence” or “The subjunctive could also be used in this sentence” (Takagaki et al. 2004: 41–41, 158–162). The indicative mood was clearly more preferred in (19) than in (18) and, conversely, preference for the subjunctive was far greater with (18) than with (19).

Fukushima’s hypothesis can explain these results as follows. It is clear from the preceding context that “you don’t know where that gulf is” is true, but this is not what the speaker wishes to convey. Taking this as given, the speaker wants to convey the fact that “that gulf really exists”. The subjunctive, with its low level modality, is appropriate for expressing such background information. On the other hand, as clearly indicated by the expression *llamar la atención* ‘call the attention’, what the speaker wishes to stress is the content of the *hecho* clause, the fact that “freedom of the press is guaranteed in Finland”. This sort of foregrounding of information is appropriate to the indicative, with its high level modality.

Such elucidation of some problems in the analysis of Spanish mood would not be possible without comparative research in a broad sense taking advantage of research on the hierarchical structure of proposition and modality, a topic that is especially advanced in Japanese language studies.

## 5 Concluding remarks

In this chapter I have shown how Japanese linguistics and Spanish linguistics contribute to each other in the understanding of modality. First, Spanish helps to explain the polysemy of certain auxiliary verbs in Modern Japanese as well as in Classical Japanese. Second, the problem of double embedding and mood selection in Spanish suggests the possibility of new discoveries concerning multiple embedding in Japanese. Third, the problem of mood selection in Spanish *hecho* ‘fact’ clauses may offer a key to the analysis of *koto* and *no* clauses in Japanese.

Japanese offers useful cues to analyze Spanish indicative and subjunctive moods as the linguistic representation of modality. It proposes a characterization of the subjunctive and its uses that may seem extraordinary at first glance. Minami (1974)’s

classification of subordinate clauses plays an important role when applied to the Spanish modal system. The proposal concerning the phenomenon of mood selection in a doubly subordinate clause in Fukushima (1990a) has drawn attention within the domain of Spanish language studies. Masuoka (1991)'s conception of a sentence being composed of a hierarchical structure of modality and proposition was the starting point for Wasa (2005)'s productive theory of modality.

When the categorization of modality in a language is fully developed, it gathers the attention of linguists and receives a detailed analysis. When not, it tends to be understudied. Japanese and Spanish may be in complementary distribution as far as modality is concerned, and so, there is still ample room for scholars of each language to contribute to the comprehension of the other, and in consequence, the comprehension of human language.

## Additional abbreviations

PP – past participle; REL – relative pronoun

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## 23 Internal state predicates in Japanese and Thai

### 1 Introduction

Japanese and Thai share the typological properties of exhibiting no morphological person marking in predicates and of allowing “zero” pronominals in discourse, although they are known to differ drastically in morphological structure (agglutinating [Japanese] vs. isolating [Thai]) and in constituent order (head-final [Japanese] vs. head-initial [Thai]). These features are exemplified by (1) and (2), where the parentheses indicate that the elements enclosed in them may be omitted (or represented by “zero”) in discourse.

- (1) (*Watasi ga* / *Kare ga*) (*anata no keeki o*) *tabe-te simat-ta*.  
I NOM / he NOM you GEN cake-ACC eat-GER finish-PST  
‘I/He have/has already eaten your cake.’
- (2) (*Chăn* / *Khăw*) *kin (khéek khǝŋ khun) léew*.  
I / he eat cake of you ASP  
‘I/He have/has already eaten your cake.’

The present chapter draws attention to a characteristic difference between the two languages concerning the syntax and semantics of what we may call “internal state predicates”, such as ‘be glad’ and ‘feel cold’. Such predicates in Japanese, when put in the present tense, have the special restriction that their subject must be the first person – a restriction that is foreign to Thai. This chapter closely examines the internal state predicates of Japanese from a contrastive perspective with those of Thai and, by showing that the so-called “person restriction” is not really person-based, makes a typological characterization of the subject restriction phenomena. It demonstrates that the difference between the internal state predicates in the two languages can be characterized as a difference in “lexicalization patterns” in the sense of Talmy (1985) and argues for a new subtype of zero pronoun called “deictic zero”, accordingly characterizing Japanese as a “deictic zero”-prominent subtype among languages of the zero pronominal type.

The organization of the chapter is as follows. Section 2 surveys the relevant predicates in Japanese and Thai with a specific focus on the person restriction phenomena exhibited only by the former. Section 3 examines the status of zero experiencer subjects of internal state predicates in the two languages, and Section

4 discusses their cross-linguistic differences in terms of a cognitive linguistic theory of subjectivity (Langacker 1985). Section 5 concludes the chapter.

## 2 Internal state predicates and the person restriction

Internal state predicates are those adjectival or verbal predicates that denote the internal states such as emotions, sensations, thought processes, etc. of sentient beings (Iwasaki 1993). It is well known that a significant number of internal state predicates in Japanese exhibit the so-called “person restriction” when they refer to an experiencer’s internal state at the time of the utterance (Kuroda 1973; Kuno 1973; Ohye 1975; Iwasaki 1993, *inter alia*). Table 1 lists ten representative examples of such adjectival predicates of emotions taken from Nishio (1972: 22), one of the first extensive studies of emotion adjectives in Japanese.

**Table 1:** Representative examples of emotional adjectivals in Japanese

<i>uresi-i</i> ‘glad, happy’	<i>natukasi-i</i> ‘yearn, miss’
<i>kanasi-i</i> ‘sad’	<i>osi-i</i> ‘regret’
<i>iya-na</i> <sup>1</sup> ‘hate (to do), be tired of’	<i>hosi-i</i> ‘want’
<i>niku-i</i> ‘hate, detest’	<i>tura-i</i> ‘find painful or unbearable’
<i>itosi-i</i> ‘think tenderly of’	<i>kurusi-i</i> ‘find painful or difficult’

Examples of adjectival predicates other than those expressing emotion above, along with derived adjectival predicates (desideratives) and verbal predicates are introduced later when they are discussed in comparison with those in Thai in Section 2.2.

### 2.1 Basic properties of the internal state predicates in Japanese

Kuroda was among the first researchers to discuss this restriction of the relevant predicates. He examined such adjectives as *atu-i* ‘hot’, *kanasi-i* ‘sad’, and *sabisi-i*

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<sup>1</sup> Unlike other adjectives in the list, *iya-na* ‘hate (to do)’ belongs to another adjectival category called “adjectival nouns” (Martin 1975) or “nominal adjectives” (Kuno 1973). They developed later in the history of the language than (regular, *i*-ending) adjectives. Emotion words in that category, unlike emotion adjectives, do not typically exhibit the person restriction (e.g. *suki* ‘like/fond of’ as in *Watasi/Kare wa Hanako ga suki da* ‘I like/He likes Hanako.’). However, some (e.g. Ohye 1975: 207) report that *iya-na* and some other adjectival nouns (e.g. *huan* ‘worried’) exhibit the same pattern as emotion *i*-adjectives, as in *Watasi/??Kare wa huan da*. ‘I am/??He is worried.’.

‘lonely’ and noted that their subjects “must be first person” (Kuroda 1973: 378), as shown by his examples in (3)–(5).

(3) *Watasi wa atu-i.*  
 I TOP hot-PRS  
 ‘I am hot.’

(4) \**Anata wa atu-i.*  
 you TOP hot-PRS  
 ‘You are hot.’

(5) \**Zyon wa atu-i.*  
 John TOP hot-PRS  
 ‘John is hot.’

Some points for clarification of possible complications in the grammatical behavior of internal state predicates in Japanese are in order before moving on to a cross-linguistic comparison of them. First, as Kuroda himself notes, Japanese sentences with internal state predicates as in (3)–(5), as well as their English translations, can be ambiguous between the experiencer subject interpretation (i.e. ‘I feel hot.’) and the stimulus subject interpretation where the subject nominal is described as having a certain property that makes others feel hot (i.e. ‘I am a hot person.’). Furthermore, ordinary uses of sensation adjectives like *atu-i* ‘hot’ without their overt subjects include ones in which their referents are indeterminate, rather than ambiguous, representing uses similar to a spontaneous outcry (Nakamura 2016). The present chapter is concerned only with the experiencer subject interpretation.

Second, although the use of internal state predicates with the second person subject is considered unacceptable by Kuroda in sentences like (4), we should point out that its unacceptability arises, at least in part, from the pragmatic infelicity of the speaker making an assertion as to the internal state of the hearer, which is readily accessible for the hearer herself, but not for the speaker (See also Kuno 1973: 83). This is in fact evidenced by the fact that the use of these predicates with the second person subject is perfectly acceptable in interrogative sentences: *Anata wa atu-i?* ‘Are you hot?’ Another, more relevant piece of evidence that pragmatic factors affect the behavior of internal state predicates in sentences like (4) comes from the fact that exactly the same acceptability pattern with second person subjects holds for Thai as well, which, as we shall see in detail in the next section, does not exhibit the kind of “person restriction” observed for Japanese internal state predicates. Observe the Thai sentences in (6) below.

- (6) a. \**Khun rɔɔn*.  
           you   hot  
           ‘You are hot.’
- b. *Khun rɔɔn mǎy?*  
           you   hot   Q  
           ‘Are you hot?’

This indicates that the pattern observed for the second person in (4) is not a property of the “person restriction” per se. In order to elucidate the nature of the subject restriction, therefore, we will focus our discussion on the contrast between first and third person experiencer patterns until we examine their use with the second person in Section 2.3.

Lastly, the person restriction in question, which holds in ordinary communicative situations, is often lifted in what Kuroda (1973) calls “non-reportive” style situations, such as a literary work in which the story is told by an omniscient narrator. This is because such an omniscient narrator can “enter into each character’s mind” (p. 382) in describing the internal state of any character in the story (see Kuroda 1973 for more details and also Iwasaki (1993) for a similar distinction of “literary mode” and “colloquial mode”). In our discussion, we will focus on the reportive style first, but later extend our discussion to cover the application of the relevant restriction in non-reportive and somewhat “less reportive” contexts as well.

## 2.2 Internal state predicates in Japanese and Thai in contrast

This section examines internal state predicates in Japanese with special focus on their structure and the range of the “person restriction” phenomena they exhibit and compares them with corresponding expressions in Thai. Let us discuss emotion predicates, such as *uresi-i* ‘glad’ and *sabisi-i* ‘lonely’ first. Such lexical items of emotion in Japanese belong to the lexical category of “adjectives”, which, unlike adjectives in English, do not require the copula to constitute a predicate but inflect for tense by themselves. The emotional adjective *uresi-i* ‘glad’, as in (7), illustrates their grammatical structure in predication:

- (7) (*Watasi wa* / \**Kare wa*) *uresi-i*.  
       I           TOP / he       TOP glad-PRS  
       ‘I am/He is glad.’
- (8) a. (*Kare wa*) *uresi-soo-da*.  
          he       TOP delighted-seem  
          ‘He looks delighted.’

- b. (*Kare wa*) *uresi-gat-teiru*.  
 he TOP glad-show.the.signs.of-ASP  
 'He is showing the signs of being glad.'
- c. (*Kare wa*) *uresi-i yoo-da*.  
 he TOP glad-PRS it.appears.that  
 'It appears that he is glad.'
- d. (*Kare wa*) *uresi-i no-da*.<sup>2</sup>  
 he TOP glad-PRS it.is.that  
 '(It is that) He is glad.'

Since the internal state predicates in Japanese in their unmarked forms cannot take the third person for their subject, to represent the third person experiencer's internal states, their predicate forms must be marked with some expression of evidentiality. Four such expressions are exemplified in (8a) through (8d). Morphologically, *soo-da* 'seem' in (8a) and *gat-teiru* 'showing the signs of' in (8b) are attached to the stems of the adjectives. In contrast, *yoo-da* 'it appears that' in (8c) and *no-da* 'it is that' in (8d) are attached to the tensed forms of emotion adjectives, which may be in the present or in the past.

Among the suffixal or auxiliary-like morphemes in (8), one important distinction can be drawn between *soo-da*, *gat-teiru*, and *yoo-da* in (8a–c), on the one hand, and *no-da* in (8d), on the other. As Kuroda (1973) and Ohye (1975) note, the attachment of the former morphemes to internal state predicates makes the third person subject possible, but renders the first person subject unacceptable instead: \**Watasi wa uresi-soo-da*. 'I seem glad.' In contrast, the latter, *no-da* 'it is that', simply lifts the person restriction, thus making the third person subject available in addition to the first person subject, as shown in (9) (cf. (7) above).

- (9) (*Watasi wa* / *Kare wa*) *uresi-i no-da*.  
 I TOP / he TOP glad-PRS it.is.that  
 '(It is that) I am/He is glad.'

It is beyond the scope of this chapter to fully characterize the semantic effects of *no-da* in Japanese, which is glossed here as 'it is that' for convenience. However, regarding its use with emotion adjectives with the third person subject, Kuroda's description is worth noting here. Using the sentence *Mary wa sabisi-i no-da*, where *no-da* is attached to an emotion adjective *sabisi-i* 'lonely' with the third person

<sup>2</sup> In colloquial speech, the *no* of *no-da* 'it is that' (and of its polite variant *no-desu*) is almost always reduced to the so-called "mora nasal" *n* to render *n-da* (and *n-desu*). Thus, in conversational discourse, the natural and more frequently attested sentence form of (8d) is: (*Kare wa*) *uresi-i n-da*.

subject *Mary*, Kuroda gives a simple sentence ‘*Mary is lonely*’ for its English translation and describes the semantic effects of *no-da* as follows:

The speaker asserts that he knows that Mary is lonely but his knowledge is not solely or perhaps even not at all based on what he perceives of Mary. [...] He might perhaps be able to judge from past experience that Mary is lonely, using circumstantial evidence of a kind that would not allow a neutral party to draw such a conclusion. Or he might even have been told by Mary that she was lonely. (Kuroda 1973: 381)

The grammatical behavior as represented in (9) and the semantic effects in the above quote concerning emotion adjectives in the *no-da* construction in Japanese are interesting from the contrastive perspective between internal state predicates in Japanese and Thai. In both grammatical behavior and function, Japanese emotion adjectives marked with *no-da*, rather than their default forms without it, resemble the default forms of their counterparts in Thai.

Emotion predicates in Thai, such as *dii-cay* ‘glad’, *sǎa-cay* ‘sad’ and *rǒn-cay* ‘worried’ (see Iwasaki 2002<sup>3</sup> for more examples), do share a structural feature with emotion adjectives in Japanese in that they do not take the copula in predication. In this regard, they both depart from their counterpart adjectives in English, which require a copula that serves to indicate the person of their subject. The use of emotion predicates in Thai is illustrated with *dii-cay* ‘glad’ in (10).

- (10) (*Chǎn / Khǎw*) *dii-cay*.<sup>4</sup>  
       I        / he        glad  
       ‘I am/He is glad.’

As noted earlier, Thai also shares a zero pronominal nature (indicated with parentheses above) with Japanese. Since emotion predicates in the two languages structurally resemble each other on these two accounts, comparison of the patterns of emotion predicates in (10) and (7) brings to the fore a characteristic structural contrast between Thai and Japanese – the person restriction. Both first and third person

<sup>3</sup> Notice here that Thai emotion predicates share a common form of [V-*cay*]. This study basically follows Iwasaki’s treatment of “the [V-*cay*] expressions as [V-Suffix]” in Iwasaki (2002: 49–51). See his discussion of the evidence for it. He notes that it is “a unit consisting of a verb and a suffix, the latter of which has been grammaticalized from the lexical noun meaning ‘heart’” (p. 60).

<sup>4</sup> In neutral contexts, first person is the preferred interpretation for the covert subject of ISPs in Thai, and third person is a possible interpretation only in marked contexts such as below:

A: <i>Thammay khǎw hǎarǎo? daŋ yàaŋ nán.</i> why        he        laugh loud kind that ‘Why did he laugh so loudly?’	B: <i>Dii-cay.</i> glad ‘(He) is glad.’
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However, even in such marked contexts, internal state predicates in Japanese cannot be used for the third person subject and require morphemes such as *no-da*, as in (9).



subjects are possible for Thai emotion predicates, whereas those in Japanese allow only the first person subject, whether overt or covert.

The remainder of this section examines internal state predicates other than emotion predicates in the two languages, namely, predicates of desire, sensation, and thought processes, to delineate the range and types of the “person restriction” phenomena exhibited by those in Japanese and find out whether the structural contrast between the two languages in terms of the restriction persists throughout the whole range.

Just like emotion adjectives, Japanese adjectives of desire, including *hosi-i* ‘want’ and all *-ta-i* derivatives ‘be anxious to’ from verbs such as *ne-ta-i* ‘want to sleep’ and *tabe-ta-i* ‘want to eat’, exhibit the same person restriction as in (11). This is contrasted with Thai predicates of desire, which can be used with the third person subject as in (12).

- (11) a. (*Watasi wa* / *\*Kare wa*) *biiru ga hosi-i/nomi-ta-i*.  
 I TOP / he TOP beer NOM want/drink-want  
 ‘I want/want to drink beer.’
- b. (*Watasi wa* / *Kare wa*) *biiru ga hosi-i/nomi-ta-i no-da*.  
 I TOP / he TOP beer NOM want/drink-want it.is.that  
 ‘(It is that) I/He want(s)/want(s) to drink beer.’
- (12) (*Chǎn* / *Khǎw*) *yàak dùu-um bia*.  
 I / he want drink beer  
 ‘I/He want(s) to drink beer.’

Regarding adjectives expressing sensation, Iwasaki (2002) reports that Thai has a wide range of pain terms including *cèp* ‘pain, a general cover-term’, *pùat* ‘deep-seated aching, usually felt to be hot and diffuse’, and *sìat* ‘focused abdominal pain’<sup>5</sup>. This is in contrast with Japanese, which has only one general adjective *ita-i* ‘hurt, ache, be painful’, which often occurs in combination with an array of mimetic adverbs, as in *sikusiku ita-i* for griping pain, *zukizuki ita-i* for throbbing pain, and *hirihiri ita-i* for tingling pain (Iwasaki 2002: 61, fn. 4). Crucially, *ita-i* has the person restriction, so that all the pain expressions with *ita-i* exhibit the person restriction, as exemplified in (13), while their Thai counterpart expressions do not have the restriction, as in (14).

- (13) a. (*Watasi wa* / *\*Kare wa*) *atama ga ita-i*.  
 I TOP / he TOP head NOM ache-PRS  
 ‘I have a headache.’

5 These examples and glosses are originally from the list of 15 Thai pain terms in Diller (1980).

- b. (*Watasi wa* / *Kare wa*) *atama ga ita-i no-da.*  
 I TOP / he TOP head NOM ache-PRS it.is.that  
 ‘(It is that) I have/He has a headache.’

- (14) (*Chăn / Khăw*) *pùat hũa.*  
 I / he painful head  
 ‘I have/He has a headache.’

Japanese internal state predicates with the person restriction include expressions of thought processes as well, such as *omou* ‘think’, *nozomu* ‘hope’, and *negau* ‘wish’ (see Ohye 1975: 193). Unlike all the adjectival predicates mentioned above, these are verbs and denote a change of state (e.g. ‘come to think’, rather than a state ‘think’, in the case of *omou*). Therefore, the internal state of a person at the speech time, first person or third person, can be expressed as the resulting state of that thought process using the resultative aspect marker *te-iru*. For the first person subject only, however, default forms of such verbs can be used to the same effect as the person restriction exhibited by emotion adjectives (Uehara 2011). The examples with *omou* ‘think’ below in (15) illustrate the situation in Japanese. In contrast, the Thai word *khít* ‘think’ exhibits no such constraint, as in (16):

- (15) a. (*Watasi wa* / *\*Kare wa*) *yotoo ga makeru to omou.*  
 I TOP / he TOP ruling.party NOM lose COMP think  
 ‘I think that the ruling party will lose (in the next election).’  
 b. (*Watasi wa* / *Kare wa*) *yotoo ga makeru to omot-teiru.*  
 I TOP / he TOP ruling.party NOM lose COMP think-RES  
 ‘I/He think(s) that the ruling party will lose (in the next election).’
- (16) (*Chăn / Khăw*) *khít wâa phák rátthabaan cà? phêe.*  
 I / he think that party government will lose  
 ‘I/He think(s) that the government party will lose (in the next election).’

In addition, Japanese has some other verbs expressing internal states that exhibit the person restriction in a way similar to, but slightly different from, the verbs of thought processes above. These include *tukareru* ‘get tired’, *odoroku* ‘get surprised’, *komaru* ‘become troubled’, and verbal idioms such as *onaka ga suku* (stomach NOM get.empty) ‘get hungry’ and *nodo ga kawaku* (throat NOM get.dry) ‘get thirsty’ (Ohye 1975). These verbal expressions also denote the internal states of human beings to which only the experiencer in principle has direct access. The perfect/past *-ta* forms of these verbs can indicate the internal states of the speaker only, while their resultative aspect *-te iru* forms, just like verbs of thought processes discussed just above, can take third- as well as first-person subjects. The sentences with *tukareru*

‘get tired’ in (17) illustrate the situation in Japanese. In contrast, its Thai equivalent, *mòt phalaŋ* (exhaust strength) ‘feel physically exhausted’ (as well as *mòt kamlançay* (exhaust mental-energy) ‘feel mentally exhausted/discouraged’), exhibits no such constraint, as in (18), an example slightly modified from Iwasaki (2002: 43).

(17) a. (*Watasi wa* / ??*Kare wa*) *tukare-ta*.  
 I TOP / he TOP get.tired-PRF  
 ‘I have got tired.’

b. (*Watasi wa* / *Kare wa*) *tukare-te-inu*.  
 I TOP / he TOP get.tired-RES  
 ‘I/He feel(s) tired.’

(18) (*Chăn / Khăw*) *mòt phalaŋ*.  
 I / he exhaust physical.strength  
 ‘I/He feel(s) physically exhausted.’

The observations made in this subsection indicate the following: (i) both Japanese and Thai, as zero pronominal languages, allow the experiencer subjects of internal state predicates to be implicit (without person-indicating copula verbs required in English or pro-drop languages such as Spanish); (ii) a substantial number of internal state predicates in Japanese exhibit the subject restriction and no such restriction is observed for corresponding expressions in Thai; and (iii) in Japanese, all such internal state predicates have some parallel, but structurally more marked, patterns that behave and function exactly like their counterpart Thai expressions. These points will be discussed separately in what follows.

## 2.3 Proper characterization of the so-called “person restriction”

The term “(first) person restriction” that has been used to refer to the phenomena exhibited by Japanese internal state predicates comes from the assumption that their subjects “must be first person” (Kuroda 1973: 378) as well as from the observations of their usage as in (3)–(5). Such a characterization, however, proves to be incorrect in light of the fact that the subject can indeed be second person in interrogative sentences, as noted in Section 2.1. In fact, Kuroda (1973: 378) notes the disparity between declarative and interrogative sentences, giving the interrogative examples in (19), which indicates as well the use of the first person subject is ungrammatical.

(19) a. \**Watasi wa atu-i desu ka?*  
 I TOP hot-PRS POL Q  
 ‘Am I hot?’

- b. *Anata wa atu-i desu ka?*  
 you TOP hot-PRS POL Q  
 ‘Are you hot?’

These considerations now lead us to modify the term “person restriction” to the “experiencer-conceptualizer identity constraint”, defined as follows: The experiencer of the situation/event has to be identical with the conceptualizer of that situation/event. The term “conceptualizer”, taken from the cognitive linguistic literature (e.g. Langacker 1985), is defined here as the person who conceives of a situation/event in order to and before making an assertion/statement about it. The conceptualizer is different from the speaker in that the latter is person-based while the former is not. The speaker can be equated with the conceptualizer only in the default context, namely in declarative sentences. Accordingly, in the interrogative sentences in (19) above, the conceptualizer is the addressee, who makes an assertion in response: (19a) is not felicitous since the experiencer is the speaker while the conceptualizer is the addressee [Experiencer (speaker)  $\neq$  Conceptualizer (addressee)]. In contrast, (19b) is felicitous because the addressee is the experiencer as well as the conceptualizer at the same time [Experiencer (addressee) = Conceptualizer (addressee)].

This new characterization of the constraint on Japanese internal state predicates has some merits over the previous, person-based one. First, it can obviate the need for postulating other rather ad-hoc parenthetical statements/explanations that would be needed for the previous definition. For example, in relation to (19), Kuroda (1973: 378) adds a comment that the person restriction observed in declarative sentences is “reversed” in interrogative sentences. However, for the third person subject it is actually not reversed and still holds for interrogative sentences, as shown in (20) [cf. (19) and (5)].

- (20) \**Kare wa atu-i desu ka?*  
 he TOP hot-PRS POL Q  
 ‘Is he hot?’

Our proposed characterization correctly renders the use of internal state predicates in the interrogative sentence in (20) ungrammatical, where the experiencer is not identical with the conceptualizer [Experiencer (third person)  $\neq$  Conceptualizer (addressee)], without recourse to any additional qualification on the constraint.

In fact, it is clear that the relevant constraint is language-specific from comparison of the Japanese case in (20) with its English translation or its Thai corresponding expression *Khǎw rǎn mǎy?*, for that matter, either of which is grammatical. The constraint of the Japanese internal state predicates is operative whether in the declarative or in the interrogative.

Secondly, the experiencer-conceptualizer identity constraint gives a natural account of why the phenomena in question cannot be found in the non-reportive style, but only in the reportive style, and even of exceptions to this stylistic rule as well. In omniscient narrator stories of the non-reportive style, internal state predicates can be used freely with third person subjects because, under our new characterization, the omniscient narrator can identify with any character in the story as the experiencer of their internal states [Experiencer (any character) = Conceptualizer (omniscient narrator)]. In other words, it is not that the restriction is “lifted” under some conditions, but rather that the experiencer-conceptualizer identity constraint takes effect in the case of an omniscient narrator in the literary mode as well.

Furthermore, the same constraint takes effect (i.e. internal state predicates have to be marked with *no-da* or the like unless the experiencer of the internal state is identical with the conceptualizer) even in soliloquy and in writing personal diaries – contexts that are not conceived of as “reportive”. In keeping a personal diary in Japanese, for example, its writer follows the constraint and uses the marked forms of predicates in describing the internal states of anyone other than herself, unless she somehow assumes she can enter into the mind of that person. The reportive mode is simply one typical context where such assumptions are not to be made. In either mode, the conceptualizer has the most basic/unmarked forms of predicates available in referring to her own internal states as the direct experiencer of them in Japanese. We will get back to this point in Section 4.

### 3 Zero pronouns and internal state predicates

This section examines zero pronouns in Japanese and Thai to explicate how the constraint on internal state predicates interacts with the zero pronominal nature of the two languages. Their interaction was already illustrated by examples (7) and (10). The two languages differ in that the experiencer-conceptualizer identity constraint holds for internal state predicates in Japanese, but not for those in Thai. In the former, the zero subjects for them in their default forms are easily recoverable and can be identified as being the speaker (i.e. default conceptualizer). Thus, the recoverability of the experiencer subjects of internal state predicates from their forms contributes to motivating zero pronouns for them in Japanese.

Shibatani (1990), in his discussion of empty categories in Japanese, introduces the type of zero pronouns under discussion as part of a larger category that he calls “*pro*”, whose distribution differs from the other types of empty categories that “show a high degree of similarity to their analogs in English and European languages” (p. 362). He argues that “a wide distribution of *pro* in Japanese is motivated by a congeries of phenomena that help the hearer identify the referents of *pros*” (p. 364), and notes that the phenomenon involving expressions of “the internal feeling of

a person” – our internal state predicates – is one of such motivating factors of *pro* occurrences (p. 364). The current study concurs with Shibatani in identifying the type of zero pronoun that he calls *pro*, but goes a step further to posit a distinct subtype of *pro* called “deictic zero”, which is to be differentiated from the other subtype, “contextual zero”. It is argued below that the two subtypes have different motivations for their occurrences.

### 3.1 Discourse data

Uehara (1998) has examined and compared all the subject pronouns in an English story and their counterpart expressions in its Japanese translation and found that zero forms of their Japanese counterparts are motivated by two different factors, namely, discourse and subjectivity factors. The discourse or “coherent anaphor” factor typically and mainly motivates occurrences of third person zero pronouns in the Japanese translation, while the subjectivity or “perspective” factor those of first person zero pronouns.

The discourse factor is the one motivating zero pronouns in the “coherent anaphor” contexts, in which they have a close affinity with their antecedents formally present in close-by discourse so they are easily recoverable. This is illustrated by the examples in typical coherent anaphor contexts, where a clausal subject has its antecedent in a separate, but directly preceding sentence, as in (21), and where a subordinate clause subject is co-referential with its main clause subject, as in (22). In these examples, both reproduced from the data in Uehara (1998), the bold-faced overt pronouns in the English original are translated into zero (represented by “ $\emptyset$ ” in the brackets) in the Japanese translation:

- (21) After the doctor had gone Sue went into the workroom and cried a Japanese napkin to a pulp. Then **she** [=  $\emptyset$  in Japanese/ =  $\emptyset$  in Thai 1; = *thəə* ‘3SG’ in Thai 2] swaggered into Johnsy’s room with her drawing board, whistling ragtime.
- (22) “She has one chance in – let us say, ten,” he said, as **he** [=  $\emptyset$  in Japanese/=  $\emptyset$  in Thai 1 & 2] shook down the mercury in his clinical thermometer.

Subjectivity is so called because it mainly concerns the use of first person reference forms (Benveniste 1971) or the “perspective” factor after Iwasaki (1993), who points out a close relationship between his S(ELF) perspective and first person subject in Japanese. Unlike the discourse factor, this factor involves the forms of certain predicates, namely, internal state predicates. The use of zero (first person) pronouns is motivated for such predicates, whose subject can be correctly assumed to be the speaker, since no third person subject can appear in the subject position. In other words, unless otherwise required, the speaker has the option of freely dropping the

subject pronoun of such predicates. This second factor is illustrated by the sentences reproduced from Uehara (1998) in (23), where the bold-faced overt first person subjects in the English original are translated into zero (represented by “ $\emptyset$ ” in the brackets) in the Japanese translation:

- (23) “There goes another. No, **I** [=  $\emptyset$  in Japanese] **don’t want** [= *hosiku-nai* in Japanese] any broth. That leaves just four. **I** [=  $\emptyset$  in Japanese] **want to see** [= *mi-tai* in Japanese] the last one fall before it gets dark. Then I’ll [= *watasi* ‘I’ in Japanese] go, too.”

Notice here that the bold-faced predicates, controlling the zero pronouns in Japanese, are both internal state predicates (*hosi-i* ‘want’ and *-ta-i* ‘be anxious to’ are a predicate and a derivational suffix, respectively, of desire as in (11) above).

Turning now to the discourse data of Thai, we find an interesting contrast in the occurrence patterns of zero pronouns between the two languages. While the discourse factor is more or less operative in Thai as well as in Japanese, the subjectivity factor, effective for Japanese, has no effect in motivating the use of zero pronouns in Thai. This is evident in Ratitamkul and Uehara (2012), who examined (two versions of) Thai translations of the same English story that Uehara (1998) analyzed along with its Japanese translation for the English and Japanese comparison introduced above. According to their analysis, zero pronouns are less frequently attested in Thai than in Japanese, and their use in the former is limited to (a subset of) the coherent anaphor contexts for those in the latter. Thus, in some cases of the zero form use in Japanese such as in (22), both of the two Thai translations take zero just like the Japanese translation, while in other cases, only one or neither of the Thai translations takes zero, using some overt forms instead such as the third person pronoun *thəə* as in (21). In other words, third person subjects in Thai take zero forms less frequently than, but basically in the same coherent anaphor contexts as, those in Japanese.

In contrast, first person subjects of internal state predicates in Thai take overt forms in the contexts in which those in Japanese are realized as zero. This is exemplified in (24), where the bold-faced first person subjects of internal state predicates (also bold-faced), as well as the first person subject of other predicates, take an overt first person pronominal form *chǎn* in both of the two Thai translations that Ratitamkul and Uehara (2012) examined (cf. the Japanese translation in (23) above).

- (24) “There goes another. No, **I** [= *chǎn* ‘I’ in Thai 1 & 2] **don’t want** any broth. That leaves just four. **I** [= *chǎn* ‘I’ in Thai 1 & 2] **want to see** the last one fall before it gets dark. Then I’ll [= *chǎn* ‘I’ in Thai 1 & 2] go, too.”

The above discussion of the discourse data in Thai and Japanese is summarized as follows: Both in Thai and Japanese, zero pronouns are found in coherent anaphor

contexts. Internal state predicates are not special at all in terms of the use of zero pronouns in Thai, while those in Japanese behave differently from other predicates and have their own motivation for the use of zero for their first person experiencer subject.

This motivation in the case of internal state predicates in Japanese, unlike those in Thai, is the experiencer-conceptualizer identity constraint. Their default forms serve to correctly identify the experiencers of the internal states. Therefore, internal state predicates involve an additional factor motivating the occurrence of (first person) zero pronouns in Japanese.

Shibatani (1990), as discussed above, classifies pronominal ellipsis into the following two types (p. 363): i) the type of ellipsis restricted to “situations involving linguistically provided antecedents”, and (ii) the type of ellipsis involving “non-linguistically provided” referents. Shibatani’s latter type does not require the referent to be linguistically present or highlighted, as exemplified in a. of (25), reproduced from Shibatani (1990: 363), where a typical colloquial exchange involves the ellipsis of the second- and first-person pronoun:

- (25) a. *Tokorode, moo kono hon yonda?*  
           by.the.way already this book read  
           ‘By the way, (have you) read this book already?’
- b. *Un, moo yonda.*  
           yeah already read  
           ‘Yeah, (I’ve) already read (it).’

Notice that the type of ellipsis or zero pronouns motivated by the internal state predicates in question belongs to neither of Shibatani’s two types of ellipsis. It differs from his first type involving “linguistically provided antecedents” because the referents of experiencer subjects of internal state predicates do not have to be linguistically present. That is, they are not linguistically provided, but are linguistically indexed. As they are linguistically indexed, there is no need to appeal to the extra-linguistic context to determine these referents. In this way, they differ from Shibatani’s second type of ellipsis as well.

In fact, zero pronouns motivated by Japanese internal state predicates depart most notably from Shibatani’s two types of zero pronouns in that the recovery of covert referents depends on the form of the predicate in the former but the discourse context in the latter. With this difference in mind, let us set up a subtype of zero pronouns called “deictic zero”, which is defined as the zero pronoun whose referent is indexed by the predicate that has the experiencer-conceptualizer identity constraint lexicalized. It is to be differentiated from the remaining discourse-based zero pronouns called “contextual zero” in this chapter.



This sub-classification is a well-motivated one, particularly in comparing zero pronominal phenomena in Japanese and Thai. Shibatani (1990) employs his two types of ellipsis above and captures the typological variation among zero pronominal languages, from i) languages like Chinese and Philippine languages, which “tend to restrict ellipsis to situations involving linguistically provided antecedents” (p. 363); to ii) languages like Japanese, which are most extreme with respect to reliance on non-linguistically provided referents. The clearest indication of the distinction, according to him, is “the impossibility of whispering to one’s lover the direct translation of the perfectly mundane Japanese expression *aisite iru yo* ‘(I) love (you)’ in Chinese or Philippine languages, which require both “I” and “you” in such an expression” (p. 363). His criteria group Japanese and Thai together, because Thai, unlike Chinese, also allows the direct translation of the Japanese expression in question (*rák sì* (love SFP) ‘(I) love (you), I tell you’). However, as seen in the previous section, deictic zero shows a marked difference between the two languages with respect to the experiencer subjects for internal state predicates. Therefore, the identification of deictic zero serves to provide a sub-typology for, and/or an additional typology crosscutting, Shibatani’s typology applicable to zero pronominal languages. The new subtypes are: a) languages like Japanese, whose internal state predicates have the experiencer-conceptualizer identity constraint lexicalized, thus motivating the occurrence of deictic zero; and b) languages like Thai, whose internal state predicates do not have such distinctive lexical specification for deictic zero.

Table 2 summarizes the above discussions (‘ISP’ stands for ‘internal state predicate’):

**Table 2:** Cross-linguistic characterization of zero pronouns

zero with linguistically provided antecedents	zero without	deictic zero for ISPs	languages
yes	no	no	Chinese, Philippine lgs.
yes	yes	no	Thai
yes	yes	yes	Japanese

### 3.2 A wider application

Setting up the “deictic zero” subtype in the category of zero pronouns has an important theoretical implication. The notion can be applied to cases of experiencer-conceptualizer identity for events other than internal states. Among such events are (deictic) motion events, denoted most typically by the verb of ‘coming’, e.g. *come* in English, *kuru* in Japanese, and *maa* in Thai. The verb *come*, in its basic motion sense, presupposes the existence of the speaker (or the hearer in some cases) at the end of the motion path (\**Let’s come over there.* (Fillmore 1966)), differing from a verb like *move* (*Let’s move over there.*). In describing deictic expressions in Japanese,

Shibatani (1990) notes: “Japanese is particularly sensitive to the marking of the event directed toward the **speaker**, and this mechanism will tell that the **omitted** goal is the **speaker**” (p. 364) [emphasis added by the authors].

The current approach would replace “the speaker” in the above quote with “the conceptualizer”, who is at the same time the experiencer (as the observer) of the motion event directed toward him/herself at its goal. This constitutes a case of the experiencer-conceptualizer identity just like the case for internal state predicates in Japanese. Thus, these predicates in Japanese and the verb of coming share a common lexicalization of this constraint, in spite of apparent differences, such as the aspectual difference of events themselves (states vs. processes).<sup>6</sup> Following Uehara (2006), let us refer to the predicates that have the experiencer-conceptualizer identity constraint conventionalized as “deictic predicates”.

In fact, deictic zero fills the gap in the traditional subcategorization theory that posits the complement/adjunct distinction: the grammatical role of the constituent referring to the speaker, *here/to me*, is “subcategorized” for by the deictic predicate, like *come*. It is apparent that the expression referring to the speaker in question is neither a complement nor an adjunct of the verb *come*. It is not a complement in its ordinary sense because it can be omitted in English (cf. complements cannot be omitted in English: *He handed it \*(to me)*). It also differs from an adjunct in that its denotation, i.e. the speaker or his location, is inherent to the predicate and present in the event denoted by the predicate, whether formally present or not (cf. an adjunct’s denotation is not implicated by the predicate: *He kissed her here. ≠ He kissed her.*). Therefore, let us coin a term and call the constituent in a deictic predicate that refers to the speaker the “deictic complement” and treat “deictic zero” as its default, implicit manifestation.

It should be noted that typological variations in lexicalization patterns (Talmy 1985) can be found for the motion deixis (i.e. *come*), as well as for internal state predicates. DeLancey (1985: 367), in his discussion of “directive” verb systems in Tibeto-Burman, notes: “In a language with an extreme version of the directive system, there are not two deictically specified lexical items ‘go’ and ‘come’, but a single unspecified motion verb [...]” and mentions Jinghpaw and Rawang. In Jinghpaw, for example, “where the deictically neutral motion verb string *sa wa*, which we can gloss for the present purposes as ‘go’, can be deictically specified (like any other motion verb) by means of the postverbal particles *r-* ‘hither’ and *s-* ‘hence’” (p. 370). His example is reproduced here in (26):

<sup>6</sup> Another difference is in the status that the deictic zero has in its respective events denoted by the predicates: for the former, it is the experiencer subject, i.e. an argument, whereas for the latter it is a locational adverb indicating the goal, which is not an argument in its usual sense of the term. This gives at least a partial account for the default impossibility of deictic zero for internal state predicates in “configurational” languages like English, where argument NPs cannot be omitted.

- (26) *MaGam gat deʔ sa wa [r-aʔ ai / s-ai].*  
 market to go here-3 DECL / from.here-DECL  
 “MaGam [came/went off] to market.”

In other words, although the languages that conventionalize internal state predicates into deictic predicates may be as small in number as those languages that fail to lexicalize motion deixis, internal state predicates in Japanese, as well as the Jinghpaw motion expressions in (26), each represent one typologically possible lexicalization pattern. Both types of states of affairs, internal states and motion events, exhibit patterns of cross-linguistic variation in lexicalization of the experiencer-conceptualizer identity constraint (see also Uehara 2006 for a discussion of other deictic predicates including verbs of ‘giving’).

Our discussion in this section is summarized in Table 3.

**Table 3:** Distribution of deictic predicates

lexicalization into deictic predicates		languages
basic motions	internal states	
no	no	Jinghpaw, Rawang
yes	no	Thai, English
yes	yes	Japanese

Getting back to the topic of deictic zero, Japanese exhibits the pattern in which internal states, as well as motion events, are conventionalized into deictic predicates, thus motivating the use of deictic zero for the expressions of both types of events. In contrast, Thai exhibits the pattern in which only motion events are conventionalized into deictic predicates, thus motivating the use of deictic zero for the expressions of motion events only. That is to say, in Japanese the contexts for the use of deictic zero are wider, and accordingly the frequency of its use is higher, than in Thai. In the next section, we turn to the discussion of what deictic zero represents.

## 4 Deictic zero and cognitive linguistic notion of subjectivity

In his seminal papers introducing the notion of subjectivity, Langacker (1985, 1990) argues that the implicit/explicit distinction of the reference to the speaker correlates with the subjective/objective distinction of her construal. The pair of sentences in (27) from his 1985 paper illustrates such a correlation.

- (27) a. There is snow all around me.  
       b. There is snow all around.

These two sentences can be uttered in describing the objectively same event/situation, in which the speaker participates as its experiencer. Yet the two contrast in the overt and covert reference to the speaker. According to him, (27a), with the explicit mention of the speaker, “suggests a detached outlook in which the speaker treats [her] own participation as being on a par with anybody else’s,” representing her objective construal, whereas (27b), with no mention of her, “comes closer to describing the scene as the speaker actually sees it” (Langacker 1990: 20), representing her subjective one.

In characterizing the implicit experiencer sentences of “proprioceptive-state” (i.e. our internal state) predicates in Thai, Iwasaki (2002) employs Langacker’s notion of subjectivity to argue that “an expression without the experiencer noun phrase (N1) forces the expression to be interpreted as a speaker’s immediate subjective response to the proprioceptive-states currently registering” (p. 55). Unlike those in Japanese, internal state predicates in Thai without subject NPs allow the experiencer to be a third person as well.<sup>7</sup> Iwasaki thus notes that “this topic [=experiencer NP] was most likely restricted to the first person in the beginning, but as the structure recurred enough times, we presume, it started to allow non-first person topics” (Iwasaki 2002: 55).

It is interesting in this regard that Langacker (1985) discusses the “subjectivity scale” and notes that “[l]inguistic expressions can be ranked according to how subjectively (or objectively) they construe a particular entity” (p. 127). According to him, the expression of implicit reference to the speaker/experiencer in (27) belongs with other “deictic” expressions whose implicit experiencer can be made explicit, and is differentiated from those expressions whose implicit experiencer **must** be left implicit, such as a spontaneous outcry of sensation in Japanese: *Samu(-i)!*<sup>8</sup> ‘(I’m) cold!’ (cf. \**Watasi (wa) samu(-i)!*). Among such “deictic” expressions, however, he makes a minor distinction between expressions like *all around* in (27) and expressions like *come* – our deictic predicates. The former is characterized as “not intrinsically deictic” (p. 134) since the non-deictic use is always possible (e.g. *There is snow all around the tree*), while the latter are “more strongly deictic” (p. 115), in that they invoke the speaker as reference point on a preferential basis.

This distinction in the intrinsicness of deixis can be applied to our cross-linguistic difference in terms of the conventionality of the experiencer-conceptualizer identity constraint between the internal state predicates in Thai and Japanese, only the latter

<sup>7</sup> Takahashi (2008: 70) disagrees with Iwasaki’s analysis: “I do not think that the implied experiencer is identical to the speaker.”

<sup>8</sup> The *-i* ending of adjectives in Japanese can be dropped especially in expressing the speaker’s immediate reaction to a given situation. See Konno (2012).

of which are deictic predicates. That is, among those deictic expressions whose implicit experiencer role nouns can be made explicit, internal state predicates in Japanese (e.g. *uresi-i* ‘glad’ in (7) above) are deictic predicates and belong to those expressions intrinsically deictic, while those in Thai (e.g. *dii-cay* ‘glad’ in (10)) belong to the group of “optionally deictic” expressions. According to this structural distinction, Japanese internal state predicates in the *no-da* construction (which serves as in (9) to lift the experiencer-conceptualizer identity constraint) are now grouped together with Thai internal state predicates under the heading of “optionally deictic”.

It should be added here that Thai also possesses a construction – the *can* construction – which combines internal state predicates with the morpheme *can* ‘truly’. This morpheme functions to impose the experiencer-conceptualizer identity constraint on the predicates it is attached to, making them behave exactly like bare internal state predicates in Japanese, as shown in (28) (Uehara 2012). In other words, Thai internal state predicates in the *can* construction represent the group of “intrinsically deictic” expressions.

- (28) a. (*Chǎn* / *Khǎw*) *dii-cay*. (= (10) )  
           I       / he       glad  
           ‘I am/He is glad.’
- b. (*Chǎn* / \**Khǎw*) *dii-cay can*.<sup>9</sup>  
           I       / he       glad   really  
           ‘I am so glad.’

Langacker describes subjective and objective construals in relation to emotions as follows:

[S]uppose I experience an emotion, such as fear, desire, or elation. If I merely undergo that experience non-reflectively, both the emotion and my own role in feeling it are subjectively construed. But to the extent that I reflect on the emotional experience – by analyzing it, by comparing it to other such experiences, or simply by noting that I am undergoing it – the emotion and my role therein receive a more objective construal. (Langacker 1990: 8)

The intrinsically and optionally deictic groups of internal states are considered to lie in the middle of a continuum from those expressions representing subjective construals to those representing objective ones, with the optionally deictic group

<sup>9</sup> It is interesting to note that when the first person pronoun is overt in (28b), replacing *chǎn* with another first person pronoun *phǒm* renders the sentence awkward: ??*Phǒm dii-cay can*. This is because the latter pronoun, unlike the former, conveys the speaker’s politeness to his interlocutor (Hoonchamlong 1992, Iwasaki and Ingkaphirom-Horie 2000), which interferes with the subjectivity of the construal represented by the *can* construction. See the relevant discussion on the association between formality and objectivity in Langacker (1985: 138).

lying closer to the objective side. Figure 1 illustrates how segments of this continuum are linguistically realized in Japanese and Thai, using *uresi-i* and *dii-cay* ‘glad’ as examples:

construal:	<div style="display: flex; align-items: center; justify-content: space-between;"> <span>subjective</span> <span>←————→</span> <span>objective</span> </div>	
experiencer:	covert (not objectified)	covert but can be made overt (can be objectified)
	conceptualizer (speaker) only	3 <sup>rd</sup> person possible
conventionality of deixis:	intrinsically deictic	optionally deictic
Japanese:	<i>uresi(-i)</i>	<i>uresi-i + no-da</i>
Thai:	<i>dii-cay + can</i>	<i>dii-cay</i>

**Figure 1:** Matrix of expressions of internal states in Japanese and Thai

Linguistic expressions representing the speaker’s subjective construals of her internal states are conventionalized and available in both languages, but they differ in the default levels of subjectivity in conventionalizing internal states by particular lexical items. In general, Japanese has a higher degree of subjectivity conventionalized in its deictic predicates than does Thai. This contrast between the two languages is strengthened by the difference in their structural markedness patterns. Unmarked forms serve as the prototype, i.e. the norm, and represent construals of the default subjectivity level in each language, while structurally more marked forms, i.e. internal state predicates in their respective constructional patterns, are employed to represent construals of the “marked” subjectivity level. Thus, Japanese and Thai differ in their default subjectivity levels in lexicalization of internal state predicates. In this regard, Japanese can be characterized as a “subjectivity-prominent” language (Ikegami 2005).

In concluding this section, two points of some theoretical importance are in order regarding this difference between Japanese and Thai. The first point concerns the relationship of the cline of subjective/objective construals in Figure 1 with the other clines/distinctions of similar modes of language. The “expressive” and “descriptive” modes of language by Iwasaki (2006), for example, have many parallels with Langacker’s subjective and objective construals, respectively (See also Maynard 2002).<sup>10</sup> The distinction between “private self” and “public self” (Hirose 1997), as well as the stylistic contrast between monologue and dialogue (Ikegami 2000), also deserve mention because of the obvious correlations between “subjective”/“expressive” and “private self”/“monologue” (of Japanese internal state predicates) and between “objective”/“descriptive” and “public self”/“dialogue” (of those in Thai).

<sup>10</sup> In this regard, see also Nakamura (2003) for his “Interactive” and “Displaced” modes of cognition. He also associates the former with Japanese and the latter with English.

Such correlations seem to give a reasonable motivation for the subtle difference between Japanese and Thai in the usage patterns of sensation predicates of pain. The adjective *ita-i* ‘ache, hurt’ in Japanese can be used by default in giving an exclamatory outcry of pain by reflex, as in *ita-i!* or, with the omission of the present tense inflection, *ita!*, or with a lengthened vowel, *itaa!* It can also be used to convey the speaker’s internal sensation to his interlocutor, often with the sentence final particle *yo* ‘I tell you’ after it, as in *ita-i yo*. Thus, in Japanese the shortest and/or unmarked forms of the pain lexical item are used in the expressive mode and it is structurally more marked in its use in the dialogue mode. In contrast, the Thai counterpart, *cèp*, can be used (with or without *óoy* ‘ouch’) only when there exists an interlocutor to whom the speaker conveys his sensation. It cannot be used as a solitary, exclamatory outcry of pain (Uehara 2012). In other words, the Thai pain lexical item is tailored for the use in the dialogue mode. This situation is summarized in Figure 2.

construal/mode:	subjective/expressive	↔	objective/descriptive
inter-personal:	private/monologue	↔	public/dialogue
(meaning)	(‘Ouch!’)		(‘I’m telling you, it hurts!’)
Japanese:	<i>Ita(-i)!</i>		<i>Ita-i (+yo)!</i>
Thai:	<i>Óoy!/*Cèp!</i>		<i>Cèp!</i>

**Figure 2:** Matrix of Expressions of Pain in Japanese and Thai

Furthermore, this contrast has a potential for application to a wider typology of zero pronominal languages. For example, a preliminary examination of Korean and Chinese internal state predicates using the structural criteria in Figures 1 and 2 suggests that Korean exhibits similar patterns to Japanese while Chinese resembles Thai (Uehara 2011).

## 5 Conclusion

The “person restriction” exhibited by Japanese internal state predicates has long been discussed in comparison to languages like English (Kuroda 1973; Ohye 1975) that have explicit person systems and/or disallow omission of personal pronouns. This chapter has contrasted the internal state predicates in Japanese with those in Thai, which belongs together with Japanese to the zero pronominal language type (with no person marking), as well as to its subtype in terms of pronominal ellipsis. It has thus brought to light typological characteristics of internal state predicates in Japanese, as well as the range and structural variations of the phenomena exhibited by them.

We have shown that the so-called “person restriction” of internal state predicates in Japanese should be viewed in terms of the conceptualizer of internal states, so that it should be termed the experiencer-conceptualizer identity constraint. Reformulated in this way, the constraint can cover the use of internal state predicates in interrogative contexts. It can also cover a wider range of phenomena outside the “reportive” contexts addressed in previous literature, including contexts where no interlocutor is present. We have also argued that the difference between internal state predicates in Japanese and Thai lies in the patterns of lexicalization. Both languages possess expressions with the experiencer-conceptualizer identity constraint conventionalized and those representing a more objective construal. Japanese predicates of internal states have been lexicalized for the former and, as deictic predicates, they have to be marked (with *no-da*) for the latter, while those in Thai have been lexicalized for the latter and thus have to be marked (with *can*) for the former. We have further argued that deictic predicates motivate the occurrence of a sub-type of zero pronoun called “deictic zero” and that zero pronominal languages can vary in the range of lexicalization of internal state predicates into deictic predicates and in the frequency of use of deictic zero, with Japanese and Thai representing two different types. It is hoped that future studies will further reveal cross-linguistic patterns of variation in this aspect of language for a more holistic typology.

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Megumi Kurebito

## 24 Property predication in Koryak viewed from Japanese

### 1 Introduction

This chapter shows how the semantic distinction between “event predication” and “property predication”, which has been developed in studies on Japanese grammar, contributes to revealing the nature of certain morphological phenomena in a Paleo-Asiatic language Koryak that have eluded cogent analysis in the previous literature.

Predicates can be divided into two major semantic classes, one that describes the unfolding of an event or state with the flow of time, and another that describes a more or less permanent, stable characteristic of a nominal entity that is not affected by the flow of time. In European linguistics, especially in formal semantics, this distinction is known as “stage-level” and “individual-level”, respectively (Milsark 1974; Carlson 1980; Krifka et al. 1995). Milsark (1974) was the first to point out that the adjectives that show up after the semantic subjects of English existential sentences are susceptible to this distinction. Because existential sentences signalled by *there* present a scene describing the existence of an entity, they are compatible with adjectives like *available* in (1a) that depict the state of the entity that holds at the time of utterance. These are stage-level predicates. On the other hand, existential sentences do not agree with adjectives like *intelligent* in (1b) that characterize the attribute of the entity that is not limited to the time of utterance. These adjectives are individual-level predicates.

- (1) a. *There were several policemen available.*  
b. \**There were several policemen intelligent.* (Carlson 1980: 71–72)

Of particular importance is that in European linguistics, the stage-individual distinction started out as a distinction of adjectival predicates; its relevance to syntactic constructions is not fully appreciated at least as far as English is concerned.

In Japanese linguistics, a similar distinction was discovered much earlier on the level of sentential construction. Thus Sakuma (1941: 53) was the first to observe that it is necessary in Japanese to distinguish two modes of sentences: *monogatariibun* (story-telling sentences) and *shinasadameibun* (characterizing sentences). He suggested that this semantic opposition was manifested as a syntactic contrast between sentences that do not have a topic with *wa*, as in (2), and sentences that are composed of a topic with *wa* and a copula *da*, as in (3).

- (2) *Taroo ga kesa ooisogide daigaku ni it-ta.*  
 Taro NOM this.morning in.a.hurry university ALL go-PST  
 ‘Taro went to the university in a hurry this morning.’
- (3) *Taroo wa genki da.*  
 Taro TOP healthy NONPST  
 ‘Taro is healthy.’

After almost half a century, Masuoka (1987, 2004, 2008) developed Sakuma’s suggestion by identifying Sakuma’s distinction between story-telling sentences and characterizing sentences as event predication and property predication, respectively, under the rubric of “typology of predication types”. A breakthrough was made by Kageyama (2004, 2006a, 2006b, 2008, 2009), who, in a way unifying the Japanese tradition with the European concepts of stage and individual, pushed the notion of property predication forward to the typological stage and argued that property predication manifests not only semantically but also as specific morphological and syntactic forms across languages. Concretely, Kageyama (2009) takes up a variety of peculiar phenomena in various languages, from compounding to case marking, which violate formal constraints but are nonetheless accepted as grammatical, and identifies the functioning of property predication in these apparently irregular phenomena.

Let us look at a few English examples, taken from Kageyama (2009), for some peculiar but grammatically acceptable expressions. (4a, b) are adjective past participles, (5a, b) are peculiar passive sentences, (6) is an adjunct subject sentence, and (7) is a patient argument elliptic sentence.

- (4) a. *a much-/well-/far-travelled man* (cf. *a much-travelled road*)  
 b. *a well-read scholar* (cf. *a well-read book*)
- (5) a. *This spoon has been eaten with.* (Davison 1980)  
 b. *That city has been fought many a battle over.* (Bolinger 1975)
- (6) *This cabin sleeps twenty people.* (Perlmutter and Postal 1984: 92)
- (7) *Tigers kill only at night.* (Goldberg 2001)

Kageyama (2009) summarizes the idiosyncrasies common to all these examples as follows:

- A. When an expression violates the structural constraint of event predication, it assumes the function of property predication.
- B. Transitivity is degraded in conversion from event into property predication. The correlation between the semantic function of property predication and the syntactically degraded transitivity is captured by the formal mechanism of event argument suppression, which shifts event predication to property predication and at the same time lowers the transitivity by breaking up the hierarchical relations in the argument structure.

However, Kageyama (2008) suggests that no language has yet been discovered that has a form exclusively dedicated to property predication.

This chapter argues that the so-called “*kachestvennye prilagatel'nye*” (qualitative adjectives; Zhukova 1972: 146) in Koryak, derived from the prefix *n-* (hereafter, N), is a form used exclusively for property predication, as in (8a) and (9a), and that N is opposed to and converted from the non-future imperfect event predication verb form *ku-/ko-...-ŋ* (hereafter, KU), as in (8b) and (9b).

- (8) a. *Kamak-Ø n-ewji-qin-Ø.*  
 Kamak-ABS.SG PRP-eat-3TOP-SG  
 ‘Kamak (permanently) eats (=Kamak is gluttonous).’
- b. *Kamak-Ø k-ewji-ŋ-Ø.*  
 Kamak-ABS.SG NFUT.IPF-eat-NFUT.IPF-3SG.S  
 ‘Kamak is/was eating.’
- (9) a. *ənmə n-ə-ŋot-qen-Ø.*  
 3SG.ABS PRP-E-angry-3TOP-SG  
 ‘He/she is (permanently) angry (=He/she has a short temper).’
- b. *Ecyi ənmə ko-ŋot-at-ə-ŋ-Ø.*  
 now 3SG.ABS NFUT.IPF-angry-VBLZ-E-NFUT.IPF-3SG.S  
 ‘He/she is angry now.’

It is demonstrated that conversion from KU to N is caused by different morpho-syntactic operations according to what syntactic function the noun – the target of property predication – bears in the corresponding KU sentence.

The structure of this chapter is as follows. Section 2 provides a brief overview of Koryak. Section 3 presents the morphological and syntactic characteristics of Koryak, focusing on several grammatical features relevant to the present discussion, and surveys the grammatical characteristics of KU prior to examining N. Section 4 presents the morphological and syntactic features of N. Section 5 demonstrates the exceptional and peculiar phenomena present in conversion from KU into N. Section 6 shows the prototypical structure of N and argues that the conversion from KU into N is directed toward the rearrangement of an argument-predicate structure into a topic-comment structure like in Japanese. Section 7 presents brief conclusions.

## 2 Profile of the language

Koryak<sup>1</sup> is a member of the Chukchi-Kamchatkan language family as are the languages of the neighboring Chukchi, Kerek, Alutor, and Itelmen peoples. It is distributed

<sup>1</sup> Koryak is characterized by marked dialectal diversity: besides the main dialects, Chawchəvan and Palana, the presence of other dialects such as Paren, Itkan, Kamenskoe, Apuka, and Karaga has been reported (Zhukova 1968). All the examples presented in this chapter are from the Chawchəvan

in the northern part of the Kamchatka peninsula and on the mainland opposite (north-east Siberia).

Typologically, Koryak is agglutinating, polysynthetic, and double-marking. Affixation (suffixes, prefixes, and circumfixes), incorporation including noun incorporation, adverb incorporation, and verb incorporation, reduplication, and suppletion are employed for word formation. Koryak owes the major driving force in promoting polysynthesis to incorporation in which almost any kind of stem can be integrated into a very long incorporative complex stem. In addition, rich verbal inflectional categories such as aspect, mood, person-number agreement with the core S-, A-, and P-arguments, and valency changes including causative, antipassive, and anticausative enable the incorporative complex stem to be completed as a polysynthetic holophrase (see Kurebito (2013, 2014, 2015, 2017) for details on the strategies for valency changes in Koryak).

Word order is relatively free, as there is agreement in person and number with the core arguments of intransitive and transitive verbs. The core argument case marking shows an ergative pattern. That is, S- and P-arguments are marked with the absolutive, while A-arguments are marked with the ergative. However, Koryak does not have an exclusive marker for the ergative except for the personal pronominal *-nan*. The locative or instrumental is used for noun ergatives according to the animacy hierarchy (Kurebito 2001).

### 3 Verbal inflection and S/A alternation in event predication

Prior to our analysis of the prefix N for property predication, let us briefly survey a few relevant grammatical features of the verbal inflection KU for event predication, since N and KU are mutually convertible by means of special grammatical operations. I focus on the position of KU in the verbal inflectional system, and S/A alternation including antipassivization, in other words, intransitivization, which plays an important role when the A-argument becomes the target of property predication.

#### 3.1 KU in verbal inflectional system

The Koryak verb inflects according to the combination of perfect versus imperfect opposition and future versus non-future opposition. It agrees with the S-argument

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dialect. The phonemic inventory of the Chawchəvan dialect is as follows: *p, t, t', k, q, v, ɣ, ʕ, c, m, n, n', ŋ, l, l', j, w, i, e, a, o, u, ə*. Voicing is not a contrastive feature and all the stops are voiceless. The symbol /'/ denotes palatalization of the dentals. /c/ is used as the symbol of the affricate [tʃ].

or with the A- and P-argument. Table 1 shows the inflectional categories of the intransitive and transitive verbs; KU indicated in gray is a non-future imperfect form.

**Table 1:** Inflectional categories of Koryak intransitive and transitive verbs (3SG.S/3SG.A3SG.P, Indicative)

Non-future				Future
perfect	Resultative		aorist	
	INTR	<i>ye-/ya-...lin/-len</i>	<i>-i/-e/-j</i>	<i>je-/ja-...-ŋ-Ø</i>
	TR		<i>-ni-n-Ø/-ne-n-Ø</i>	<i>je-/ja-...-ni-n/-ne-n-Ø</i>
imperfect	INTR	<i>ku-/ko-...-ŋ-Ø</i>		<i>ja-/je-...-iki/-eke</i>
	TR	<i>ku-/ko-...-ŋ-ni-n-Ø/-ne-n-Ø</i>		<i>je-/ja-...-jk-ə-ni-n/-ne-n-Ø</i>

The following examples (10) and (11) are those of KU; (10) is an intransitive, while (11) is a transitive. Note that KU can occur with a temporally limited adverb such as *ecyi* ‘now, today’ and *ajyave* ‘yesterday’ as it is a form for event predication.

- (10) *Ecyi / Ajyave qajəkmɪŋ-ə-n jaja-k*  
 today yesterday boy-E-ABS.SG house-LOC  
*ku-jəlqet-ə-ŋ-Ø.*  
 NFUT.IPF-sleep-E-NFUT.IPF-3SG.S  
 ‘Today/yesterday the boy is/was sleeping in the house.’
- (11) *ŋanko ecyi / ajyave qajuju-pill’aq-a*  
 there today yesterday newborn.reindeer-DIM-INS(ERG)  
*ko-tənp-ŋ-ə-ne-n ɣəm-nin-Ø en’pic-Ø.*  
 NFUT.IPF-gore-NFUT.IPF-E-3SG.A3SG.P 1SG-POSS-ABS.SG father-ABS.SG  
 ‘Today/yesterday the newborn reindeer is/was goring my father over there.’

### 3.2 S/A alternation

There are two types of valency change in Koryak, that is, the S/P alternation and the S/A alternation. The S/P alternation refers to a phenomenon in which the P-argument in the absolutive case is foregrounded and the A-argument in the ergative is backgrounded in transitive sentences. On the other hand, the S/A alternation refers to a shift in focus from the P-argument to the A-argument. There are five main patterns for S/A alternation: 1) affixation of antipassivizing *ine-/ena-*, *-tku/-tko*, or *-cet/-cat*, e.g. *ekmit-ə-k*→*in-ekmit-ə-k* ‘to take,’ *ʕaʕa-k*→*ʕaʕa-cit-ə-k* ‘to drag’; 2) P-incorporation, e.g. *qoja-ɣənnət-ə-k* ‘to herd reindeer,’ *qoja-nomakav-ə-k* ‘to gather reindeer’; 3) affixation of denominal verbal affixes with transitive meanings, such as ‘kill,’ ‘eat,’

‘drink,’ ‘make,’ ‘hunt,’ and others; e.g. *ənnətsul-u-k* ‘to eat fish,’ *ta-pla-ŋ-ə-k* ‘to make boots’; 4) suppletion, e.g. *ewji-k* [INTR] versus *ju-kkə* [TR] ‘to eat,’ *iwwici-k* [INTR] versus *pəl-ə-k* [TR] ‘to drink’; and 5) conversion, e.g. *pəŋlo-k* ‘to ask’ [INTR][TR], *valom-ə-k* ‘to listen’ [INTR][TR].

Through the S/A alternation, the underlying A-argument is promoted from the ergative to the absolutive and the underlying P-argument is either deleted or demoted to an oblique case, which may be instrumental, locative, or dative depending on the degree of affectedness of the P (Kurebito 2014, 2015). At the same time, the S/A alternation applies to the underlying transitive clause and forms a derived intransitive. As will be discussed in Section 5, in Koryak, degradation of transitivity in conversion from event into property predication, which Kageyama (2008) points out, manifests itself in the S/A alternation.

(12a), (12b), and (12c) are examples of S/A alternation. (12a) is a transitive sentence, while (12b) is the corresponding antipassive intransitive sentence in which the verb is prefixed by the antipassive marker *ine-* and at the same time the underlying P-argument is deleted. In contrast, (12c) is an example of the S/A alternation formed by the P-incorporation. Note that through the P-incorporation *əlwə* ‘wild reindeer’ loses its original meaning and obtains the generalized meaning ‘wild animal’.

- (12) a. *ə-nan ecyi ŋanko ku-leŋu-ŋ-ni-n*  
 3SG-ERG now there NFUT.IPF-see-NFUT.IPF-3SG.A-3SG.P  
*əlwəʔəl-Ø*.  
 wild.reindeer-ABS.SG  
 ‘Now he/she sees a wild reindeer over there.’
- b. *ənno ecyi ŋanko k-ine-leŋu-ŋ-Ø*.  
 3SG.ABS now there NFUT.IPF-ANTIP-see-NFUT.IPF-3SG.S  
 ‘Now he/she sees (something) over there.’
- c. *ənno ecyi ŋanko ku-we-leŋu-ŋ-Ø*.  
 3SG.ABS now there NFUT.IPF-wild.reindeer-see-NFUT.IPF-3SG.S  
 ‘Now he/she sees a wild animal over there.’

(13a) and (13b) illustrate the S/A alternation between the transitive verb and its semantically corresponding denominal verbal circumfix. (13a) is a transitive sentence with transitive verb *tejk* ‘make’, while (13b) is the corresponding intransitive formed with the circumfix, *ta-...-ŋ*, also meaning ‘make’.

- (13) a. *Ecyi qecyəlqot-na-k wala-Ø*  
 now Qechgulqot-ANM.SG-LOC(ERG) knife-ABS.SG  
*ku-tejk-ə-ŋ-ni-n*.  
 NFUT.IPF-make-E-NFUT.IPF-3SG.A-3SG.P  
 ‘Now Qechgulqot is making a knife.’



- b. *Ecyi qecyəlqot-Ø*  
 now Qechgulqot-ABS.SG  
*ko-ta-wala-η-ə-η-Ø.*  
 NFUT.IPF-make-knife-make-E-NFUT.IPF-3SG.S  
 ‘Now Qechgulqot is making a knife.’

(14a) and (14b) are examples of the S/A alternation by suppletion. (14a) is a transitive sentence with a transitive verb *nu* ‘eat’, while (14b) is the corresponding intransitive sentence with a suppletive intransitive verb *ewji* ‘eat’. Note that the underlying P here is demoted to the instrumental.

- (14) a. *Ecyi ηanko qoja-ta*  
 now there reindeer-INS(ERG)  
*ku-nu-η-ni-n* *pəʕo-n.*  
 NFUT.IPF-eat-NFUT.IPF-3SG.A-3SG.P mushroom-ABS.SG  
 ‘Now the reindeer is eating a mushroom over there.’
- b. *Ecyi ηanko qoja-ηa k-ewji-η-Ø*  
 now there reindeer-ABS.SG NFUT.IPF-eat-NFUT.IPF-3SG.S  
*pəʕona-ta.*  
 mushroom-INS  
 ‘Now the reindeer is eating mushrooms over there.’

## 4 Morphosyntactic and semantic characteristics of the N form

### 4.1 Difference from the general adjectives

As mentioned in Section 1, N has been treated as a qualitative adjective in the traditional grammar of Koryak (Zhukova 1972: 146). Certainly, according to the syntactic criteria, N meets the requirement of an adjective in that it has both attributive and predicative functions (e.g. *nəmejəŋqin jajana* ‘a big house’, *Jajana nəmejəŋqin*. ‘The house is big.’).

Nonetheless, N has a number of features that prevent it from falling into the adjective class in its strict sense. First, the N forms derived from purely adjective stems are not so many; e.g. (15). N can be derived not only from an adjective stem, but also from a noun, adverb, or verb stem. It is quite productively derived from verbs in particular (Kurebito 2010). In English, for instance, adjectives can be derived from verbal stems by means of the productive derivational suffix *-y* (e.g. *to ache* > *achy*, *to blow* > *blowy*). But not all the verb stems can combine with *-y* (e.g.

to eat > \*eaty, to use > \*usy). In contrast, almost all the verbal stems can combine with the N-suffix in Koryak.

- (15) *n-ə-mejəŋ-qin* ‘big’, *n-əppl’u-qin* ‘small’, *n-ə-qi-qin* ‘thick’, *n-ə-vəl’γ-ə-qen* ‘thin’,  
*n-iwl-ə-qin* ‘long’, *n-ikm-ə-qin* ‘short’ (adjective stems)
- (16) *n-ə-pijkəl-qin* ‘muggy’ ← *pijkəl-Ø* ‘mugginess’  
*n-ə-ŋikəl-qen* ‘shamed’ ← *ŋikəl-Ø* ‘shame’  
*n-ə-muqe-qin* ‘rainy’ ← *muqe-muq* ‘rain’  
*n-ə-jəŋa-qin* ‘foggy’ ← *jəŋa-jəŋ* ‘fog’ (nominal stems)
- (17) *n-ə-teŋi-qin* ‘a few’ ← *teŋi* ‘fewly’  
*n-ə-juleq-qin* ‘long (time)’ ← *juleq* ‘for a long time’  
*n-ə-jaŋɤaw-qen* ‘precise’ ← *jaŋɤaw* ‘precisely’  
*n-ə-win’v-ə-qin* ‘secret’ ← *win’ve* ‘secretly’ (adverbial stems)
- (18) *n-ewji-qin* ‘gluttonous’ ← *ewji* ‘eat (INTR)’  
*n-ə-nu-qin* ‘edible’ ← *ju* ‘eat (TR)’  
*n-ə-java-qen* ‘usable’ ← *java* ‘use’  
*n-ə-joɤ-ə-qen* ‘obtainable’ ← *joɤ* ‘obtain’ (verbal stems)

Second, contrary to the generally acknowledged case that an adjective describes the character and state of a nominal entity regardless of stability (Kamei, Kōno and Chino (eds.) 1996) (e.g. *Taro is (permanently) cheerful* versus *Taro is being (temporarily) cheerful*, *the gray house* versus *the gray sky*), N only describes the permanent property and stable state of a nominal entity. Therefore, the N cannot occur with a temporally limited adverb such as ‘now’, ‘today’, ‘yesterday’ and so on. Instead, the KU form is used in order to designate a temporal or a passing state of a nominal entity, and can occur with the above temporally limited adverb. Example (19a) is a KU form from the adjective stem *jilɤ* ‘glad’, occurring with the temporal adverb *ecyi* ‘now’. Next, (19b) is unacceptable because *ecyi* cannot occur with the N. Then, (20a) is a KU form from the verb stem *ewji* ‘eat (INTR)’ with *ecyi*, while (20b) is not acceptable with *ecyi*.

- (19) a. *ənnno ecyi ku-jilɤ-et-ə-ŋ-Ø.*  
 3SG.ABS now NFUT.IPF-glad-VBLZ-E-NFUT.IPF-3SG.S  
 ‘He/she is now glad.’
- b. \**Ecyi ənnno n-ə-jilɤ-ə-qen-Ø.*  
 now 3SG.ABS PRP-E-glad-E-3TOP-SG
- c. *ənnno n-ə-jilɤ-ə-qen-Ø.*  
 3SG.ABS PRP-E-glad-E-3TOP-SG  
 ‘He/she is (permanently) glad (=He/She is happy person in nature).’

- (20) a. *Ecyi ənno k-ewji-ŋ-Ø.*  
 now 3SG.ABS NFUT.IPF-eat-NFUT.IPF-3SG.S  
 ‘Now he/she is eating.’
- b. \**Ecyi ənno n-ewji-qin-Ø.*  
 now 3SG.ABS PRP-eat-3TOP-SG
- c. *ənno n-ewji-qin-Ø.*  
 3SG.ABS PRP-eat-3TOP-SG  
 ‘He/she is (permanently) gluttonous.’

These observations reveal that N is not so much an adjective in its general sense of the word as a form that is exclusively used for property predication.

## 4.2 Nouny N

It is well known that in general the adjective lacks independence as a separate word class, and that it is instead a subclass of either verb or noun (Wetzer 1996). Thus, in Latin, the lexical representation of concepts that semantically correspond to English adjectives, exhibit the morphosyntactic characteristics of nouns: they are inflected for gender, number, and case, and require the copula in predicate position. In contrast, in Ainu what would be expressed by adjectives in other languages is usually expressed by verbs (e.g. *poro* ‘to be big, to become big’, *pon* ‘to be small, to become small’) (Tamura 2000: 36). Japanese has two kinds of adjectives, that is, more verb-like adjectives and more noun-like adjectives (Yakame 2007). Thus, the question arises: “Is N verbal or nominal, granting that N is an adjective?”

In Table 1 above showing the verbal-inflectional system of Koryak, the N form is absent. However, N in Chukchi, a language genetically related to Koryak, is included in the verbal-inflectional system and codes non-future imperfective. See Table 2, based on Nedjalkov (1994: 281). The N form is indicated in gray.

**Table 2:** The inflectional system of Chukchi intransitive jet ‘come’ (3SG.S, Indicative)

Non-future			Future
	not recently, universally	now, recently	
Perfective	<i>ge-jet-lin</i>	<i>jet-gʔi</i>	<i>re-jet-gʔe</i>
Imperfective	<i>ny-jet-qin</i>	<i>yety-rkyn</i>	<i>re-jety-rkyn</i>

According to Skorik (1977) and Nedjalkov (1994), Chukchi N, unlike Koryak N, expresses various kinds of event predication, for example, a habitual action of past or present (21) or a progressive action of past or present (22), (23). In addition, it

expresses property predication (24a), in contrast to event predication sentences like (24b) (Tokusu Kurebito, p.c.).

- (21) *ətri qonpə ɲoten-yəty-ə-k n-ə-kupre-tku-qinet.*  
 3PL.ABS always this-lake-E-LOC IPF-E.lay.a.net-ITERA-3PL.S  
 ‘They always lay a net/used to lay a net in this lake.’
- (22) *N-ə-rayt-ə-jyəm ajwe, naqam ətlon jaynaw-e-Ø.*  
 IPF-E-go.home-E-1SG.S yesterday then 3SG.ABS meet-PF-3SG.S  
 ‘Yesterday I was going home, and then he met me.’
- (23) *Ajwe n-iw-iyət:...*  
 yesterday IPF-say-2SG  
 ‘Yesterday you were saying...’
- (24) a. *ɲotqen relku-n n-om-at-qen-Ø.*  
 this room-ABS.SG PRP-warmth-VBLZ-3TOP-SG  
 ‘This room is (permanently) warm.’  
 b. *ɲotqen relku-k om-at-ə-rkən-Ø.*  
 this room-LOC warm-VBLZ-E-IPF-3SG.S  
 ‘This room is (temporarily) warm.’

Matsumoto (2007) asserts that the Chukchi adjective is verbal in terms of this dichotomous typology of verbal versus nominal adjectives. This assertion probably comes from the fact that N is productively derived from a verb stem and that it describes not only property predication but also event predication, as seen above.

Actually, however, N exhibits behavior alien to that of other inflectional verb forms: N has a word-final person marker similar to that of the nominal predicate. Compare, in (25), the paradigm of the Koryak N predicate from the adjective stem *mejŋ* ‘big’ with that of the nominal predicate from the noun stem *en’pici* ‘father.’ Both predicates behave similarly, except that *-qin/-qen* appears in the third person of the N predicate.

- | (25) <u>N predicate</u>                     | <u>nominal predicate</u>                   |
|---|--|
| <i>n-ə-mejŋ-ə-jyəm</i> ‘I am big.’          | <i>en’pici-jyəm</i> ‘I am a father.’       |
| <i>n-ə-mejŋ-ə-muji</i> ‘We two are big.’    | <i>en’pici-muji</i> ‘We two are fathers.’  |
| <i>n-ə-mejŋ-ə-muju</i> ‘We are big.’        | <i>en’pici-muju</i> ‘We are fathers.’      |
| <i>n-ə-mejŋ-ə-jye</i> ‘You(SG) are big.’    | <i>en’pici-jyi</i> ‘You are a father.’     |
| <i>n-ə-mejŋ-ə-tuji</i> ‘You two are big.’   | <i>en’pici-tuji</i> ‘You two are fathers.’ |
| <i>n-ə-mejŋ-ə-tuju</i> ‘You(PL) are big.’   | <i>en’pici-tuju</i> ‘You are fathers.’     |
| <i>n-ə-mejəŋ-qin-Ø</i> ‘He/she is big.’     | <i>en’pic-Ø</i> ‘He is a father.’          |
| <i>n-ə-mejəŋ-qine-t</i> ‘They two are big.’ | <i>en’pici-t</i> ‘They two are fathers.’   |
| <i>n-ə-mejəŋ-qine-w</i> ‘They are big.’     | <i>en’pici-w</i> ‘They are fathers.’       |

A further affinity between the N form and nouns is observed in the fact that N agrees with the head noun in number.

- (26) a. *n-ə-mejəŋ-qin-Ø* *jaja-ŋa* 'a big house (SG)'  
 b. *n-ə-mejəŋ-qine-t* *jaja-t* 'two big houses (DU)'  
 c. *n-ə-mejəŋ-qine-w* *jaja-w* 'big houses (PL)'

Due to these morphological and syntactic similarities between N and nouns, Bogoras (1922: 776) calls N the “the nominalized form of the verb”. Stassen (1997) also regards the N prefix *n-* as a nominalizing prefix.

Moreover, the morphological and syntactic ‘nouniness’ of N coordinates with the semantic nouniness. According to Givón’s notion of *temporal stability* (2001), the prototype of the class ‘noun’ occupies the most time-stable end of the scale, while prototype verbs are coherent bundles of experience of relatively short duration that occupy the other end of the time-stability scale. The fact that in Koryak, noun-like N describes property predication and verbal KU describes event predication corresponds with this generalization by Givón (2001).

However, it is not that N and KU stand in opposition on the temporal stability scale but that they can be converted into each other. In other words, not only temporarily stable nouns but also unstable verbs as well as adjectives, which are intermediate between nouns and verbs, can express either property predication by combining with the N prefix or event predication by combining with the KU circumfix. This can be schematized as in Figure 1, based on Givón’s temporal stability scale (2001).

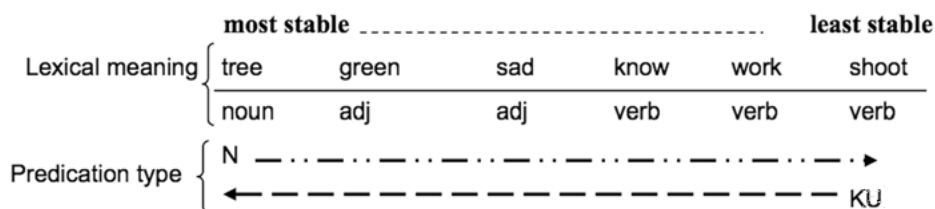


Figure 1: Correlation between word class and predication type in Koryak

## 5 Conversion of KU to N

This section examines what kinds of syntactic operations and morphological and syntactic features can be observed in the conversion from KU to N. Syntactic operations on N vary in the following ways, according to what syntactic function the noun – the target of property predication – bears in the corresponding event predication sentence.

- (a) When the S-argument becomes the target of property predication, there is no change on the side of the argument and only KU is converted into N.
- (b) When the A-argument becomes the target of property predication, there occurs S/A alternation. In this process, the underlying ergative A in KU is promoted to the absolutive in N, while the underlying absolutive P in KU is either deleted or demoted to an oblique case or incorporated into a transitive verb. When the underlying transitive P becomes the target of property predication, the transitive verb stem takes the N prefix and the underlying A is deleted.
- (c) When an oblique noun becomes the target of property predication, it takes the absolutive case.

## 5.1 Property predication of the S-argument

When the S-argument in the absolutive case in KU becomes the target of property predication, the case marker does not change. N can be formed simply by attaching the N prefix and the topic marker to the verb stem. However, if the verb stem derives from an adjective, the verbalizer is deleted. Compare the following KU examples, (27a) and (28a)=(9b), with the corresponding examples using N, (27b) and (28b)=(9a). Note that the KU form in (27a) with the verb stem *ejeŋu* ‘fish’ is simply converted into N without any change in the stem, while that in (28a) with the adjective stem *ŋot* ‘angry’ deletes the verbalizer suffix *-at* in conversion.

- (27) a. *Ecyi Kamak-Ø k-ejeŋu-ŋ-Ø.*  
           now Kamak-ABS.SG NFUT.IPF-fish-NFUT.IPF-3SG.S  
           ‘Kamak is fishing now.’  
       b. *Kamak-Ø n-ejeŋu-qin-Ø.*  
           Kamak-ABS.SG PRP-fish-3TOP-SG  
           ‘Kamak (permanently) fishes (= Kamak is a fishing enthusiast).’
- (28) a. *Ecyi ənno ko-ŋot-at-ə-ŋ-Ø.*  
           now 3SG.ABS NFUT.IPF-angry-VBLZ-E-NFUT.IPF-3SG.S  
           ‘He/she is angry now.’  
       b. *ənno n-ə-ŋot-qen-Ø.*  
           3SG.ABS PRP-E-angry-3TOP-SG  
           ‘He/she is (permanently) angry (=He/she has a short temper).’

## 5.2 Property predication of the A-argument

When the A-argument becomes the target of property predication, S/A alternation is employed. Below, (29a) is a KU sentence with the transitive verb *anja* ‘praise’ and

(29b) is an example of property predication in which the verb stem is suffixed by the antipassivizing suffix *-cet* while the underlying A-argument is promoted to the absolutive case and the underlying P-argument is demoted to the dative. In this case, the object of praise is the mother's own son. Meanwhile, (29c) is an example of property predication in which the P-argument is incorporated into the verb and the underlying A-argument is promoted to the absolutive. In this case, the object of praise is not the mother's own son and not a definite, but rather an indefinite, child (or children).

- (29) a. *Ecyi kəmiŋ-ə-n k-anja-ŋ-ne-n*  
 now child-E-ABS.SG NFUT.IPF-praise-NFUT.IPF-3SG.A-3SG.P  
*əllɬ-a.*  
 mother-INS(ERG)  
 'Now the mother is praising the child.'
- b. *əlla-Ø n-anja-cet-qen-Ø kəmeŋ-ə-ŋ.*  
 mother-ABS.SG PRP-praise-ANTIP-3TOP-SG child-E-DAT  
 'The mother (permanently) praises her (own) child (=The mother likes to praise her (own) child).'
- c. *əlla-Ø n-ə-kmeŋ-ə-ʔ-anja-qen-Ø.*  
 mother-ABS.SG PRP-E-child-E-E-praise-3TOP-SG  
 'The mother (permanently) praises children (=The mother likes to praise a child).'

(30a) (=13a) is a KU sentence with the independent transitive verb stem *tejk* 'make'. Meanwhile, the circumfix *ta...-ŋ*, with the same meaning, is used for S/A alternation instead of P-argument incorporation as in (30b). This operation also applies to conversion from KU into the corresponding N, as in (30c).

- (30) a. *Ecyi Qecyəlqot-na-k wala-Ø*  
 now Qechgulqot-ANM.SG-LOC(ERG) knife-ABS.SG  
*ku-tejk-ə-ŋ-ni-n.*  
 NFUT.IPF-make-E-NFUT.IPF-3SG.A-3SG.P  
 'Now Qechgulqot is making the knife.'
- b. *Ecyi Qecyəlqot-Ø*  
 now Qechgulqot-ABS.SG  
*ko-ta-wala-ŋ-ə-ŋ-Ø.*  
 NFUT.IPF-make-knife-make-NFUT.IPF-E-3SG.S  
 'Now Qechgulqot is making a knife'

- c. *Qecyəlqot-Ø*                      *n-ə-ta-wala-η-qen-Ø.*  
 Qechgulqot-ABS.SG    PRP-E-make-knife-make-3TOP-SG  
 ‘Qechgulqot (permanently) makes knives (=Qechgulqot likes to make knives).’

Next, (31c) is an example in which S/A alternation by suppletion in KU, as in (31a=14a) and (31b=14c), is applied to property predication.

- (31) a. *Ecyi ηanko qoja-ta*  
 now there reindeer-INS(ERG)  
*ku-nu-η-ni-n*                                      *pəʃon.*  
 NFUT.IPF-eat-NFUT.IPF-3SG.A-3SG.P mushroom-ABS.SG  
 ‘Now the reindeer is eating a mushroom.’
- b. *Ecyi ηanko qoja-ηa*                      *k-ewji-η-Ø*  
 now there reindeer-ABS.SG    NFUT.IPF-eat-NFUT.IPF-3SG.S  
*pəʃona-ta.*  
 mushroom-INS  
 ‘Now the reindeer is eating a mushroom over there.’
- c. *Qoja-ηa*                      *n-ewji-qen-Ø*                      *pəʃona-ta.*  
 reindeer-ABS.SG    PRP-eat-3TOP-SG    mushroom-INS  
 ‘Reindeer (permanently) eats mushrooms (=Reindeer likes to eat mushrooms).’

### 5.3 Property predication of the P-argument

When the P-argument becomes the target of property predication, its absolutive case marking does not change, but the A-argument is deleted. The transitive stem then combines directly with the N prefix. Compare KU (32a) (=29a) and the corresponding N (32b) in which the P-argument becomes the target of property predication.

- (32) a. *Ecyi kəmiŋ-ə-n*                      *k-anja-η-ne-n*  
 now child-E-ABS.SG    NFUT.IPF-praise-NFUT.IPF-3SG.A-3SG.P  
*əllɿ-a.*  
 mother-INS (ERG)  
 ‘Now the mother is praising the child.’
- b. *Kəmiŋ-ə-n*                      *n-anja-qen-Ø.*  
 child-E-ABS.SG    PRP-praise-3TOP-SG  
 ‘The child is (permanently) praised.’



(33a) and (33b) also illustrate conversion from KU to N. Here, the P-argument becomes the target of property predication. Note that the P-argument remains in the absolutive and the A-argument is deleted.

- (33) a. *ə-nan ku-tejk-ə-ŋ-ni-n*  
 3SG-ERG NFUT.IPF-make-E-NFUT.IPF-3SG.A-3SG.P  
*naly-ə-n jetem-ə-tʃul-u.*  
 fur.skin-E-ABS.SG tent.cover-E-piece-ESS  
 ‘He/she is making a tent cover with fur skin.’
- b. *Naly-ə-n n-ə-tejk-ə-qjn-Ø jetem-ə-tʃul-u.*  
 fur.skin-ABS.SG PRP-E-make-E-3TOP-SG tent.cover-E-piece-ESS  
 ‘Fur skin is processed as a tent cover (as a cultural practice).’

## 5.4 Property predication of an oblique noun

When a noun that appears in the oblique case in KU becomes the target of property predication, it is promoted to the absolutive. (34b) is the example in which the noun ‘house’ that appears in the locative case in KU (34a), *jaja-k* ‘in the house’, is promoted to the absolutive *jaja-ŋa* in the N sentence. Note that the gloss ‘3SG.S’ given for the verb agrees with the dummy subject, which is generally used for weather.

- (34) a. *Ecyi jaja-k k-om-at-ə-ŋ-Ø.*  
 now house-LOC NFUT.IPF-warmth-VBLZ-E-NFUT.IPF-3SG.S  
 ‘Now it is warm in the house.’
- b. *Jaja-ŋa n-om-qen-Ø.*  
 house-ABS.SG PRP-E-warmth-3TOP-SG  
 ‘The house is (permanently) warm.’

## 6 From argument to topic: a peculiar syntactic operation for topicalization

In the sections above, we have examined morphologically and syntactically peculiar phenomena seen in the process of conversion from KU into N. The examination reveals that the N sentence allows not only a S-argument and a P-argument but also an A-argument and even an oblique noun to occur in the absolutive case, which does not fit with the general constraints with KU. This suggests that such a noun is not an argument but a topic.

In other words, we could argue that N is a *comment* in the informational structure, arranged to allow any noun in the sentence to become a *topic*. Further, as the

other nouns (except for the topic noun) are surplus to this <topic–comment> structure, they are either backgrounded as oblique nouns or deleted. This is the basic structure for property predication in Koryak, which can be schematized as follows.

(35) Structure of N

NOUN [the absolutive]	n-STEM-PERSON/NUMBER	(NOUN[oblique])
<topic>		<comment>

Thus, the most essential structural change caused by the conversion from KU to N is that of the grammatical relation ‘argument–predicate’ into the informational structure ‘topic–comment.’ Interestingly this fact coincides with the suggestions by Sakuma (1941) and Masuoka (2008) that property predication in Japanese is expressed with a topic sentence ...*wa*...*da*, consisting of topic and comment.

However, this difference between event predication and property predication does not mean that their syntactic operations are completely separate. A property predication sentence is created by making use of the structural constraint of the corresponding event predication sentence, and at the same time, by partially violating it. This fact is related to Masuoka’s suggestion that there is an open passage between property predication and event predication (Masuoka 2008).

Kageyama (2009) explains this situation by introducing an abstract argument called “the event argument”. That is, Kageyama argues that compared with their event predication counterparts, such exceptional property predication sentences suffer a decrease in transitivity, manifesting in intransitivization, impersonalization, and non-passivity. This correlation between the semantic function of property predication and its syntactically degraded transitivity, Kageyama argues, is captured by the formal mechanism of event argument suppression, which shifts event predication to property predication and at the same time lowers the transitivity of the sentence by breaking up the hierarchical relations within the argument structure.

## 7 Conclusions

This chapter has shown how the insights gained from the studies on the property predication in Japanese help illuminate the nature of the KU to N conversion in Koryak, although the formal mechanism employed in the two languages differ. The major claims made in our discussion will be summarized as follows.

- (i) From morphosyntactic and semantic points of view, the N form, that is, the traditionally named Koryak “qualitative adjective” is an exclusive form used for property predication.
- (ii) There is an essential distinction between KU for event predication and N for property predication; the former is based on grammatical relations such as

argument–predicate relations while the latter is based on informational structure relations such as topic–comment relations like Japanese topic sentences of the form ‘*X wa Y da.*’

- (iii) In spite of this essential difference, KU and N are related in that the latter is created by using and partially violating the structural constraints of the former.

In the literature on Japanese, the existence of the opposition between non-topic and topic sentences served as a trigger to open the way to cross-linguistic typological predication studies. On the other hand, Koryak, which lacks a topic-copula construction, realizes the difference between property and event predication as both a morphologically and syntactically clear form. It is natural that one and the same semantic distinction is embodied by different morphosyntax in different languages. This chapter suggests the possibility of broadening the scope of predication typology even further than assumed by Japanese linguists.

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## Additional abbreviations

ANM – animate; DIM – diminutive; E – epenthesis; IPF – imperfect; ITERA – iterative; NFUT – non-future; PF – perfect; PRP – property predication; VBLZ – verbalizer

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Kaoru Horie

# **25 Subordination and insubordination in Japanese from a crosslinguistic perspective**

## **1 Introduction**

This chapter presents characteristics of subordination phenomena in Japanese from a linguistic typology perspective. This chapter pays specific attention to the form-functional continuum of subordinate clauses, which cross-cuts the traditional “discrete” categorization of relative, complement, and adverbial clauses by incorporating the insights of functional/typological works on the non-discrete nature of subordination phenomena (e.g. Croft 2001; Bisang 2007; Horie and Pardeshi 2009; Horie 2011) as well as the findings from descriptive and theoretical works on complex sentences in Japanese linguistics (e.g. Minami 1974; Nitta (ed.) 1995; Gendai Nihongo Kijutsubunpō Kenkyūkai 2008; Masuoka 2013; Masuoka et al. 2014).

The analytical foci of this chapter are on (i) the manifestation of subordination phenomena in Japanese (Section 2), (ii) their formal and functional affinity with main clauses (Section 3), and (iii) the use of a subordinate clause as a main clause, i.e. “insubordination” (Evans 2007), which is extensively observed in spoken Japanese (Section 4).

## **2 A typology of subordinate clauses in Japanese**

Since the 1980s, subordination has continually attracted focused attention from typologically oriented researchers, yielding several important collected volumes and monographs on the subject (e.g. Shopen 1985, 2007; Foley and Van Valin 1984; Haiman and Thompson 1988; Croft 2001; Horie 2001; Cristofaro 2003; Laury 2008; Dixon and Aikhenvald 2011; Laury and Suzuki 2011; to name just a few).

Traditionally, subordinate clauses have been classified into three types, i.e. relative clauses (“those which function as modifiers of nouns” (Thompson, Longacre, and Hwang 2007: 238)), complement clauses (“those which function as noun phrases”), and adverbial clauses (“those which function as modifiers of verb phrases or entire clauses”), as illustrated in (1a–d). The three types of subordinate clauses are contrasted with coordinate clauses (2) and independent sentences (main clauses) (3).

- (1) a. *The news [which surprised everyone] was Nixon's resignation.*  
(relative clause)
- b. *The news [that Nixon resigned] surprised everyone.*  
(complement clause with a nominal head)
- c. *He said [that Nixon resigned].* (complement clause with a verbal head)
- d. *[When Nixon resigned], everyone was surprised.* (adverbial clause)
- (2) *[Nixon resigned] and [everyone was surprised].* (coordinate clauses)
- (3) *Nixon resigned. Everyone was surprised.* (main clauses)

Among the three types of subordinate clauses, a complement clause such as (1b) and a relative clause like (1a) “usually represent an embedding structure at the subordinate end of the continuum, i.e. a clause within another one, and a clause within a noun phrase, respectively” (Thompson, Longacre, and Hwang 2007: 238). Adverbial clauses, in contrast, are “viewed as (hypotactic) clauses combining with respect to the main clause since they relate to the main clause as a whole” and “are in some sense ‘less subordinate’ than the prototypes of the other two types on the continuum” (Thompson, Longacre, and Hwang 2007: 238). The main focus of this section is placed on the former two types of subordinate clauses, i.e. complement and relative clauses, and adverbial clauses, which will be discussed in detail in Section 3, will be mentioned only in relation to them.

The Japanese counterparts to the examples of the subordinate clauses in (1), “coordinate” clauses in (2), and main clauses in (3), are shown in (4), (5), and (6) respectively:

- (4) a. *[Minna o odorokase-ta] nyuusu wa*  
everyone ACC surprise-PST news TOP  
*Nikuson no zinin dat-ta.*  
Nixon GEN resignation COP-PST  
‘The news which surprised everyone was Nixon’s resignation.’  
(relative clause)
- b. *[Nikuson ga zininsi-ta] (toiu) nyuusu wa*  
Nixon NOM resign-PST COMP news TOP  
*minna o odorokase-ta.*  
everyone ACC surprise-PST  
‘The news that Nixon resigned surprised everyone.’  
(complement clause with a nominal head)



- c. *Kare wa [Nikuson ga zininsi-ta] to/tte it-ta.*  
 he TOP Nixon NOM resign-PST COMP say-PST  
 ‘He said that Nixon resigned.’ (complement clause with a verbal head)
- d. *[Nikuson ga zininsi-ta] toki ni minna wa*  
 Nixon NOM resign-PST time LOC everyone TOP  
*odoroi-ta.*  
 be.surprised-PST  
 ‘When Nixon resigned, everyone was surprised.’ (adverbial clause)
- (5) *[Nikuson wa zininsi]-te, [minna wa odoroi-ta].*  
 Nixon TOP resign-GER everyone TOP be.surprised-PST  
 ‘Nixon resigned, (and/but) everyone was surprised.’ (“coordinate” clause)
- (6) *Nikuson wa zininsi-ta. Minna wa odoroi-ta.*  
 Nixon TOP resign-PST everyone TOP be.surprised-PST  
 ‘Nixon resigned. Everyone was surprised.’ (main clauses)

Traditional Japanese grammar makes a two-way distinction of complex sentences into *rentai shūshoku setsu* ‘noun modification clauses’ and *renyō shūshoku setsu* ‘predicate modification clauses’ which cross-cuts the three-way distinction of subordinate clauses (4) and “coordinate” clauses (5). Relative clauses and complement clauses with a nominal head (4a, b) are grouped into the same category of *rentai shūshoku setsu*, while complement clauses with a verbal head (4c), adverbial clauses (4d), and “coordinate” clauses (5) are classified into *renyō shūshoku setsu*.

The clause in (5) marked by *-te*, referred to as “gerundive” (GER) or as a “converb” marker in other chapters of this volume, is a bit problematic. Unlike its coordinate counterpart in English (2), the *te*-clause is syntactically dependent on the main clause because it lacks tense and cannot stand by itself. According to the three-way classification of clause combining by Foley and Van Valin (1984), which we will revisit in Section 3, the *te*-clause is arguably identified as a “co-subordination” structure (Ohori 2004; see also Figure 1, to be introduced later in this section). “Co-subordination” is distinguished from subordination in that, while both are dependent on the main clause, only the latter is embedded within the main clause. Thus, Minami (1974) treats the *te*-marked clause as *jūzokuku* ‘subordinate clause’. Furthermore, Iwasaki (2013: 259) explicitly states that “in Japanese a clear coordination strategy is lacking” and proposes the term “conjoining”. We follow Iwasaki’s proposal and treat the *te*-clause and other similar structures in Japanese as “conjoined clauses” instead of “coordinate clauses”. This language-particular situation in the coding of “coordination” in Japanese is not surprising if we concede that “(t)he relationship between “subordinate” and “main” (coordinate) clauses is clearly a continuum” (Thompson, Longacre, and Hwang 2007: 237).

Returning to our main topic, i.e. subordination, the formal distinction between the three types of subordinate clauses shown in (1) and (3) is not necessarily clear-cut. In particular, there is some formal resemblance cross-linguistically observed between relative clauses and complement clauses. In English, for instance, the generic subordinator *that* can code a relative clause (7a), a complement clause with a nominal head (7b), and a complement clause with a verbal head (7c). However, it is nevertheless possible to syntactically distinguish a relative clause (7a), and the two types of complement clauses (7b, c) by means of a genuine relative pronoun like *which*.

- (7) a. *the book* [{*that/which*}surprised everyone] (relative clause)  
 b. *the news* [{*that/\*which*}Nixon resigned]  
 (complement clause with a nominal head)  
 c. *John thinks* [{*that/\*which*} the student bought the book]  
 (complement clause with a verbal head)

As discussed by Comrie and Horie (1995), Japanese shows the opposite patterning, in that relative clauses and complement clauses with a nominal head are coded alike (8a, b), whereas complement clauses with a verbal head can show a different pattern (8c) (subordinate clause portions of examples (4a–c) are repeated as (8)):

- (8) a. [*minna o odorokase-ta*] *nyuusu*  
 everyone ACC be.surprised-PST news  
 ‘the news which surprised everyone’ (relative clause)  
 b. [*Nikuson ga zininsi-ta*] (*to iu*) *nyuusu*  
 Nixon NOM resign-PST COMP news  
 ‘the news that Nixon resigned’ (complement clause with a nominal head)  
 c. [*Nikuson ga zininsi-ta*] *to/tte*  
 Nixon NOM resign-PST COMP  
 ‘that Nixon resigned’ (complement clause with a verbal head)

Indeed, relative clauses and complement clauses with a nominal head in Japanese are known to comprise “noun-modifying clauses” or “attributive clauses” (Comrie and Horie 1995; Comrie 1998), which are subject to varying interpretations, prototypical ones of which correspond to relative clauses and nominal complement clauses, such as (8a) and (8b). However, as extensively discussed by Teramura (1992), Matsumoto (1997), Masuoka (2000), Matsumoto and Comrie (this volume), and many others, noun-modifying clauses in Japanese are known to require pragmatically enriched interpretations such as (extended) causality, as illustrated in (9a) and (9b) (examples 9a and 9b attributed to Teramura 1992 and Matsumoto 1997).

- (9) a. *[atama ga yoku naru] kusuri*  
 head NOM well become medicine  
 ‘the medicine which one become intelligent’ (literal meaning)  
 ‘the medicine which causes one to become intelligent’  
 (enriched interpretation)
- b. *[toire-ni ike-nai] komaasyaru*  
 toilet-to go.POTEN-NEG commercial  
 ‘the TV commercial which (one) cannot go to a restroom’ (literal meaning)  
 ‘the TV commercial which (is so interesting by itself that one) cannot  
 (may fail to) go to a restroom during the break’ (enriched interpretation)

Revisiting complement clauses with verbal heads, aside from the quotative complementizers *to* and *tte* (4c, 8c), Japanese has three other complementizers, i.e. *no*, *tokoro*, and *koto*, all of which are nominal. These three nominal complementizers are known to exhibit a semantic contrast along the “direct/percept” – “indirect/concept” distinction, with *no* and *tokoro* encoding the former concept (10a) and *koto* the latter (10b) (Kuno 1973; Josephs 1976; Horie 1997, 2000).

- (10) a. *Zyon wa [doroboo ga mise kara deteku-ru]*  
 John TOP thief NOM shop from come.out-PRS  
*{no/tokoro}-o mi-ta.*  
 NMLZ/NMLZ-ACC see-PST  
 ‘John saw the thief coming out of the shop.’
- b. *Zyon wa [doroboo ga mise kara deteki-ta]*  
 John TOP thief NOM shop from come.out-PST  
*koto o atode sit-ta.*  
 NMLZ ACC later know-PST  
 ‘John later learned that the thief came out of the shop.’

Subordination in Japanese also manifests a complex coding pattern along the dividing line between noun-modifying clauses and adverbial clauses. Consider the examples in (4a, b, d), which are repeated below as (11).

- (11) a. *[minna o odorokase-ta] nyuusu*  
 ‘the news which surprised everyone’ (relative clause)
- b. *[Nikuson ga zininsi-ta] (to iu) nyuusu*  
 ‘the news that Nixon resigned’ (.complement clause with a nominal head)
- c. *[Nikuson ga zininsi-ta] toki*  
 ‘when Nixon resigned’ (lit. ‘the time that Nixon resigned’) (adverbial clause)

It should be noted that the adverbial clause (11c) is marked by the noun *toki* ('time'). The adverbial clause (11c) thus formally resembles the relative and complement clauses (11a, b), both of which constitute embedded structures with nominal heads. In fact, adverbial clause markers in Japanese more often than not consist of (i) grammaticalized nouns such as *tokoro* 'place' (10a), *koto* 'matter' (10b), *mono* 'thing', or a semantically bleached generic nominalizer *no* (10a), *toki* 'time' (11c), *ori* 'occasion', *sai* 'occasion', *tame* 'purpose, reason', *yoo* 'appearance', and (ii) case particles such as nominative *ga*, accusative *o*, locative/allative *ni*, locative/instrumental *de*, ablative *kara*, or genitive *no* (Horie 1997, 1998), as illustrated in (12):

- (12) *tokoro-(ga)* ('on the occasion when, unexpectedly'), *tokoro-o* ('on the occasion when'), *tokoro ni* ('on the occasion when, by accident'), *tokoro-de* ('even though'), *koto-de* ('because'), *koto-kara* ('due to the fact that'), *mono-o* ('even though'), *mono-de* ('because'), *mono-no* ('though'), *no-ga* ('as, while'), *no-o* ('as, while'), *no-ni* ('though'), *no-de* ('because'), *toki-(ni)* ('when'), *ori-(ni)* ('when'), *sai-(ni)* ('when'), *tame-(ni)* ('in order that, because'), *yoo-(ni)* ('in order that, just as'), etc.

Adverbial clause markers and conjoined clause markers, which are not nominal at least synchronically, are presented in (13) and (14) respectively. The clauses marked by these markers will be discussed in Sections 2 and 3.

- (13) *nagara* ('while'), *kara* ('because'), *nara* ('if'), *ba* ('if'), *tara* ('if'), *to* ('if, when'), etc.  
 (14) *kedo* ('and, but'), *ga* ('and, but'), *te* ('and', 'and then', etc.), *si* ('and') etc.

The prevalence of nominal elements in the membership of adverbial markers, such as in (12), shows that the dividing line between adverbial clauses and other more 'nominal' subordinate clauses, i.e. relative and complement clauses, may not always be clearly maintained in Japanese.

In fact, certain types of subordinate clauses headed by the nominalizers *no* and *tokoro*, which are followed by the accusative case particle *o*, are subject to multiple interpretations. They include "internally headed relative" and "circumstantial adverbial" clause interpretations (see Cu 1988; Kuroda 1992; Ohori 2001; Horie 2011; and [Matsumoto and Comrie (this volume)]) for a fuller discussion of the nominalization which takes on internally headed relative clause interpretations). Consider (15), which is a slightly modified counterpart to (16) (originally (10b)):

- (15) *Zyon wa [doroboo ga mise kara deteki-ta]*  
 John TOP thief NOM shop from come.out-PST  
*{no/tokoro} o tukamae-ta.*  
 NMLZ/NMLZ ACC catch-PST  
 (internally headed relative clause interpretation)  
 ‘John caught the thief who was coming out of the shop.’  
 (adverbial clause interpretation)  
 ‘John caught the thief as he was coming out of the shop.’
- (16) *Zyon wa [doroboo ga mise kara deteki-ta]*  
 John TOP thief NOM shop from come.out-PST  
*koto o atode sit-ta.*  
 NMLZ ACC later know-PST  
 (complement clause interpretation)  
 ‘John later learned that the thief came out of the shop.’

The only difference between (15) and (16) lies in the choice of matrix verbs *tukamaeta* ‘caught’ versus *sitta* ‘learned’. Yet, the same nominalized clause can yield very different structural interpretations ranging from “complement” (16) to “internally headed relative” (15) to “adverbial” clauses (15). The existence of such an “under-specified” structure, which can be interpreted as either of the two (or even three) subordinate clause types, led to the proposal of the continuum of complex sentence types by Croft (2001), shown in Figure 1. As discussed extensively in Horie (2011), the

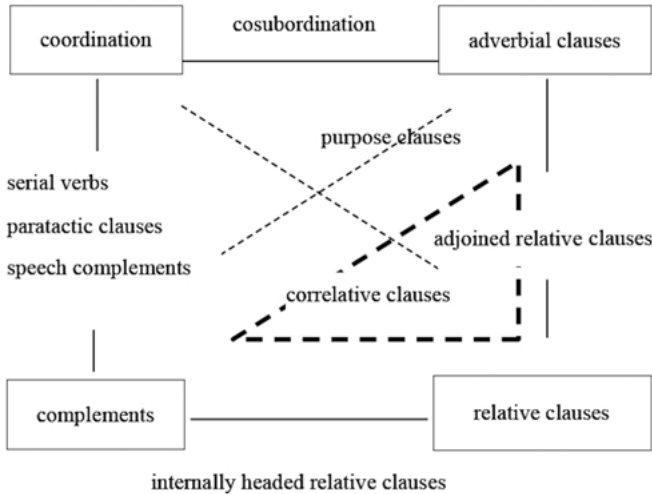


Figure 1: The continuum of complex sentence types (adapted from Croft 2001: 322)

clause structure nominalized by *no* and *tokoro* (with the former semantically less restricted) can be plotted as a triangle region in Figure 1. The triangle representation indicates that the nominalized structure in question (15, 16) can receive a structural interpretation of any of the three subordinate clauses.

As pointed out in Horie (2011), the nominalized clause (11), which describes a dynamic event, has a static counterpart (17). Crucially, the nominalizer *tokoro* ‘place, location’ is not felicitous in the latter construction arguably due to the semantic constraint that it must code a visually perceived dynamic event (Horie 2000). Only the most semantically bleached generic nominalizer *no* is acceptable in the latter construction.

- (17) *Zyon wa [ringo ga tukue no ue ni oite.at-ta]*  
 John TOP apple NOM desk GEN top LOC be.put-PST  
*{no/\*tokoro} o tabe-ta.*  
 NMLZ/NMLZ ACC eat-PST  
 ‘John ate an apple, which happened to be placed on the desk.’

The extent to which a subordinate clause with a nominal head can be flexibly interpreted, be it a lexical noun such as *kusuri* ‘medicine’ (9a) or a grammaticalized nominalizer such as *no* (15, 17), is considerably wider in Japanese than in many other languages. For instance, the counterpart to (9a) in Mandarin Chinese needs to code causality overtly (18), while a sentence like (17) in Korean is not fully acceptable (19)<sup>1</sup>:

- (18) *[shǐ tóunǎo biàn cōngmíng] de yào*  
 cause head become clever DE medicine  
 ‘the medicine [which \*(makes) your head become clever]’
- (19) *\*?John-un [sakwa-ka chayksang wi-ey nohye*  
 TOP apple-NOM desk top\_LOC be put  
*iss-ess-ten] kes-ul mek-ess-ta.*  
 exist-PST-PST:ATTR NMLZ-ACC eat-PST-DECL  
 ‘John ate an apple, which happened to be placed on the desk.’

### 3 Subordinate and main clauses: How they converge

The main topic of this section is the linguistic coding of adverbial and conjoined clauses and their relationship to main clauses. As briefly introduced in Section 2, adverbial clauses in Japanese are either coded by means of nominalization, as in

<sup>1</sup> Yale Romanization is employed to represent Korean examples.

(12), or without recourse to nominalization, as in (13). The conjoined clauses are also coded without employing nominalization, as in (14). They mark a variety of semantic relationships with regard to the main clauses, e.g. cause/reason, purpose, conditionality, event sequence, simultaneity, concession, contrast, manner etc.

A subordinate clause coded by nominalization (12), e.g. the *koto-de* clause in (20), is not only dependent on the main clause but is also embedded within it. In contrast, a clause coded without recourse to nominalization, e.g. *te*-clause in (5), repeated below as (21), is not embedded in a main clause, though it is dependent.

- (20) [*Nikuson ga zininsi-ta*] *koto de*,  
 Nixon NOM resign-PST NMLZ INST  
*minna wa odoroi-ta*.  
 everyone TOP be.surprised-PST  
 ‘Because Nixon resigned, everyone was surprised.’

- (21) [*Nikuson ga zininsi*]-*te minna wa odoroi-ta*.  
 Nixon NOM resign-GER everyone TOP be.surprised-PST  
 ‘Nixon resigned (lit. Nixon resigning), (and) everyone was surprised.’

According to Minami (1974; see also Minami 1993; Iori 2017), adverbial and conjoined clauses in Japanese are classified into three subtypes, depending on the differential degrees of affinity to the main clause. The three types of adverbial and conjoined clauses, labeled *A-rui* (Class A), *B-rui* (Class B), and *C-rui* (Class C) by Minami, become progressively more and more similar to the matrix clause, beginning with the least similar, Class A, and ending with the most similar, Class C. In Minami’s framework, the differing degrees of affinity to the main clause are manifested by an increase in the range of grammatical elements (or “operators” according to Foley and Van Valin 1984) allowed to occur inside the adverbial clause in question. The range of grammatical elements is most restricted with Class A clauses such as a *nagara*-clause (22) in which the passive voice marker *-(r)are*, but neither the progressive aspect *-te-i-* nor past tense marker, for instance, is allowed:

- (22) *Sono inu wa [hippar-are-(*\*te-i*)-(*\*ta*)] nagara, nai-te-i-ta*.  
 that dog TOP drag-PASS-GER-exist-PST while bark-GER-exist-PST  
 ‘That dog was barking while being dragged.’

With Class B clauses such as a reason/cause *no-de* clause (23), the range of grammatical elements allowed is extended to include marking of aspect, tense, and addressee-politeness (e.g. *masu*), for instance, but not of topic (*wa*):

- (23) [Sono inu {ga/\*wa} hippar-are-te-i-(masi)-ta] node,  
 that dog NOM/TOP drag-PASS-GER-exist-POL-PST because  
 Taroo wa kawai-sooni nari-masi-ta.  
 Taro TOP feel.sorry become-POL-PST  
 ‘Taro felt sorry for the dog because it was being dragged.’

Finally, with class C clauses such as a reason/cause *kara*-clause, the range of grammatical elements allowed is even greater, allowing for topic marking, as in (24).

- (24) [Sono inu {ga/wa} hippar-are-te kyankyan nai-te-i-  
 that dog NOM/TOP drag-PASS-GER alarmingly bark-GER-exist-  
 masi-ta] kara, Taroo wa kawai-sooni nari-masi-ta.  
 POL-PST because TOP feel.sorry become-POL-PST  
 ‘Because the dog was being dragged and was barking alarmingly, Taro felt sorry for it.’

**Table 1:** Minami’s classification of clauses (A through C) based on the grammatical elements occurring in non-predicate position or with the predicate

	Class A	Class B	Class C
Elements occurring in non-predicate position	Non-subject case-marked (e.g. accusative <i>o</i> -marked) NP, Manner and Degree adverbs, a Class A subordinate clause etc.	<b>(Besides Class A elements)</b> Subject case-marked (typically nominative <i>ga</i> -marked) NP, Temporal PP (Post-positional Phrase), Locative PP, Evaluative adverbials, Negative polarity items, Class A and B subordinate clauses etc.	<b>(Besides Class A, B elements)</b> Topic marked (i.e. <i>wa</i> -marked) NP, Epistemic modal adverbs, Class A, B, and C subordinate clauses etc.
Elements occurring with the predicate	Causative suffix <i>-(s)ase-</i> , Passive suffix <i>-(r)are-</i> , Favor-giving/receiving expression (e.g. <i>-te ageru/morau</i> ), Subject honorification suffix (e.g. <i>o~ninaru</i> ) etc.	<b>(Besides Class A elements)</b> Addressee politeness suffix <i>-(mas-)</i> , [Negation suffix <i>-nai</i> ], [Past/Perfective suffix <i>-ta</i> ] etc. *[ ] indicates that not all Class B subordinate clauses can incorporate the elements in question.	<b>(Besides Class A, B elements)</b> Addressee politeness suffix <i>-(mas-)</i> , Negation suffix <i>-nai</i> , Past/Perfective suffix <i>-ta</i> , Intentional suffix <i>-oo/yoo</i> , Epistemic modality suffixes <i>-daroo</i> , <i>-mai</i> etc.

Minami’s multi-layered classification of Japanese adverbial and conjoined clauses, as summarized in Table 1, is compared to Foley and Valin’s (1984) three-layered clause structure model consisting of nucleus, core, and periphery, each of which is distinguished from the others in terms of the set of operators on each layer, e.g. aspect and directional (nuclear operators), modality (core operator), status, tense, evidentials, and illocutionary force (peripheral operators) (see Ohori 2014).



Compared to adverbial clauses and conjoined clauses, prototypical “embedded” subordinate structures, i.e. relative clauses and complement clauses with nominal heads (collectively referred to as noun-modifying clauses), tend to be more restricted in terms of the occurrence of “operators” characteristic of main clauses. These operators serve to mark illocutionary force, addressee politeness (cf. Bisang 2007) and the speaker’s evaluative and affective stance toward the proposition and the addressee, e.g. the topic marker *wa*, addressee politeness auxiliaries *masu* and *desu*. They are allowed to occur within ‘less subordinate’ subordinate and conjoined clauses such as Class B clauses (cf. (23) for addressee politeness marking), and Class C clauses (cf. (24) for topic marking). These operators are not normally allowed to occur within the noun-modifying clauses, as in (25):

- (25) *Kore wa [Taroo {ga/\*wa} {hait-ta/\*hairi-masi-ta}]*  
 this TOP Taro NOM/TOP enter-PST/enter-POL-PST  
*heya desu.*  
 room COP:POL  
 ‘This is the room that Taro entered.’

As extensively discussed in Horie (2014a), what is cross-linguistically peculiar and noteworthy about Japanese noun-modifying clauses is that this constraint can be circumvented in various ways in favor of discourse-pragmatic considerations. These considerations include (i) the conventionalized courtesy requirement in maintaining the level of addressee politeness throughout the entire noun-modifying clause (Matsumoto 2009), which allows for the use of the addressee politeness auxiliary *-masu* in (26); and (ii) the need to report the original speaker’s “voice” verbatim (Maynard 2008) for a dramatic and animating effect, as in (27a, b). In (27), instead of the regular noun-modifying quotative complementizer *to iu* (28), less explicit linking devices are employed to signal the closer “conceptual distance” iconically (along the line of “iconic motivation” proposed by Haiman 1983) such as the innovative use of the genitive marker *no* (27a) and even non-use of any complementizer (27b), where the direct quotation is directly juxtaposed to the head noun.

- (26) *[O-moosikomi-ni nari-masi-ta] kaado o hakkoo sase-te*  
 HON-apply-to-become-POL:PST card ACC issue cause-GER  
*itadaki-masu.*  
 humbly.receive-POL:PRS  
 ‘We shall respectfully issue a card [for which you had sent an application form].’  
 (Matsumoto 2009: 206)

- (27) a. *“Doo si-masita ka” no toi*  
 how do-POL:PST Q ATTR question  
 ‘the question asking – “Is anything the matter?”’
- b. *“Kita!” {Ø} kan tuyomaru.*  
 come:PST impression become.strengthened.  
 ‘The impression “(The statue) has just come (into sight)!” becomes strengthened.’  
 (Maynard 2008: 73–75)
- (28) *[Nikuson ga tuini zininsi-ta zo!] \*(to iu) yorokobi no sakebi*  
 Nixon NOM finally resign-PST SFP COMP joy GEN shout  
 ‘the shout of joy (saying) “Hey, Nixon finally resigned!”’

Languages differ in terms of whether or not and to what extent they allow for the “main clause”-like noun-modifying clauses like (26) and (27). Korean is known to have noun-modifying clauses which are functionally similar to Japanese. However, the ‘main-clause’ like extension of noun modifying clauses is normally not allowed, as in (29) and (30). In (29), the honorific-level addressee politeness suffix *-supni-* is categorically disallowed. In (30), the direct quotation is juxtaposed to the head noun without any complementizer, which is not allowed either.

- (29) *\*[Ecey tulye-ss-supni-ten] saywu-nun pelsse*  
 yesterday humbly.donate-PST-POL-ATTR shrimp-TOP already  
*tusye-ss-supni-kka.*  
 eat:HON-PST-POL-Q  
 ‘Did you already eat the shrimp that I had humbly donated to you?’
- (30) *\*[“Wa-ss-ta!”] {Ø} nukkim-i kanghayci-n-ta.*  
 come-PST-DECL impression-NOM become.strengthened-PRES-DECL  
 ‘The impression “(The statue) has just come (into sight)!”  
 becomes strengthened.’

It is noteworthy that, though not a very common phenomenon, English has a prenominal relative clause wherein the original speaker’s utterance is quoted verbatim to characterize the head noun, as in (31):

- (31) *Dan: You’re referring to the recent “not fun” event... also known as the “You two share a brother, oh, no, you don’t!” rollercoaster.*  
 (Gossip Girl: Season 2, Episode 16 “You’ve Got Yale!” (19 Jan. 2009; <http://www.imdb.com/title/tt1266851/>)  
 (Daisuke Yokomori, personal communication)

## 4 Insubordination and its uses in Japanese

This section closely examines the pragmatic-discursive use of Japanese subordinate and conjoined clauses<sup>2</sup> as main clauses, referred to as “insubordination”, which is defined as “the conventionalized main clause use of what, on *prima facie* grounds, appear to be formally subordinate clauses” (Evans 2007: 367), and illustrated in the following spoken Finnish example (32) (Ritva Laury, personal communication):

- (32) *jos: nähdää huomenna vaikka?*  
 if meet:PASS tomorrow for.example  
 ‘Let’s meet tomorrow, for instance.’

In (32), the conditional clause coded by *jos* (‘if’) serves to make a proposal.

Insubordination has received relatively little attention in linguistic typology until recently, arguably because languages differ rather considerably in the inventory/repertoire and frequency of “insubordinate” constructions. For instance, insubordination is not necessarily a very prominent phenomenon in languages like English, though it does occur, as shown in (33) where the main clause infinitive serves to express surprise:

- (33) *To think that she should be so ruthless!*  
 (Evans 2007: 404)

Cross-linguistically, insubordination seems to be employed more frequently in spoken language than in written language, as illustrated by the conditional *jos* (‘if’) clause in Finnish (32) (see Lindström, Lindholm, and Laury 2016). Japanese undoubtedly belongs to those languages wherein insubordination is a very prominent phenomenon, especially in spoken language. Insubordination has been labeled “*iisashi*” (lit. ‘speech left hanging’) and has received much attention in Japanese linguistics (e.g. Shirakawa 2009). In Japanese, almost any type of subordinate clause, i.e. relative, complement, adverbial, and even conjoined clauses, can be turned into a main clause which stands on its own and serves some pragmatic-discursive function at the sentence-final position.

Let us consider the prototypical pragmatic-discursive functions of insubordination in Japanese. We will cover three classes of insubordinate clauses: (i) relative clauses and complement clauses with a nominal head (4.1), (ii) complement clauses

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<sup>2</sup> Conjoined clauses are not typical sources of insubordination. However, since Japanese conjoined clauses are dependent on the main clause and are thus partially subordinate, we will include them as sources of insubordinate clauses. In this connection, it is of interest to note that the coordinating conjunction *but* has become grammaticalized into a final particle in Australian English (Mulder and Thompson 2008).

with a verbal head (4.2), and (iii) adverbial and conjoined clauses (4.3). The pragmatic-discursive functions are slightly different across different classes, though they may overlap. Before moving into the analysis of each class of insubordinate clauses, it is necessary to review the typology of functions presented in Evans (2007), one of the few typological works on this topic. Evans noted that insubordination serves a variety of functions including those listed in (34) cross-linguistically:

- (34) a. indirection and interpersonal control (p. 387): “primarily imperatives and their milder forms such as hints, requests, but also permissives, warnings, and threats.”
- b. modal insubordination (p. 394): “to express various kinds of modal meaning, both epistemic – having to do with belief, truth, knowledge about the proposition – and deontic, i.e. ‘concerned with action, by others and by the speaker himself’ (Palmer 1986: 96) to bring about a state of affairs denoted by the proposition.”
- c. signaling presupposed material (p. 410): “to signal high levels of pre-supposed material in the insubordinate proposition, i.e. relatively specific presuppositions about the discourse context in which the sentence can occur. (...) Specific examples of this use of insubordination are: (a) negation, (b) focus constructions, (c) discourse contrast, (d) stipulated conditions before assenting to preceding assertions in interaction, (e) reiterations, (f) disagreement with assertions by the previous speaker.”

The typology of functions in (34), though not intended to be exhaustive, is instructive and hence shall be consulted when we consider the pragmatic-discursive functions of each insubordinate clause.

#### 4.1 Relative clauses and complement clauses with a nominal head

Relative clauses and complement clauses with a nominal head can occur in sentence-final position independently as a stylistic strategy labeled “*meishi teiji bun*” (noun presentational sentence) by Ishiguro (2007: 161). According to Ishiguro, this strategy is employed as part of various sentence-final manipulations which, by omitting the predicate itself, serve to avoid the monotonous or even imposing-sounding repetition of polite or plain style sentence-final predicates. Specifically, noun presentational sentences prototypically serve as a kind of “headline” (Ishiguro 2007: 161). This strategy is thus frequently employed in news media (e.g. newspapers). Onishi (2013: 32) observes that, in newspapers, omission of the plain speech level copula *da*, which yields a sentence-final relative clause (35) or complement clause with a

nominal head (36, 37), is motivated by the prioritization of brevity due to space limitations.

- (35) *Sakurai-syo niyoruto genba-wa syadanki ya keihooki ga*  
 Sakurai-station according.to site-TOP crossing.gate and alarm NOM  
*nai humikiri.*  
 not.exist crossing

‘According to Sakurai station, the accident site was a crossing where there was no crossing gate or alarm.’

(MSN Sankei 2012-8-3; cited in Onishi 2013: 27)

- (36) *Kono syooyu wa sinise no seihin*  
 this soy.sauce TOP shop of long standing GEN product  
*to no koto.*  
 QUOT NOML

‘It is reported that this soy sauce is a product of a store of long standing.’

(MSN Sankei 2012-8-3; cited in Onishi 2013: 26)

- (37) *Kono hoka ni mo hokusuu no zyookyaku ga kega o*  
 This other LOC also several GEN passenger NOM injury ACC  
*si-te iru moyoo.*  
 do-GER exist appearance

‘Apparently, several passengers other than those reported have been injured.’

(MSN Sankei 2012-8-3; cited in Onishi 2013: 28)

Sentence-final relative clauses, which are employed frequently in newspaper media (35), also occur in movie or television show scripts, as shown in (38):

- (38) *Renko (basu ni) tobinoru. [Simaru] doa.*  
 Renko bus to jump.and.ride close.door  
 ‘Renko jumps onto the bus. The door which closes.’  
 (Scenario: *Ohikkosi* ‘moveout’)  
 (Tsubomoto 1998: 182)

According to Tsubomoto (1998: 182), a sentence-final relative clause (38) serves to describe and explain the scene being witnessed before one’s very eyes as it unfolds. Such sentence-final relative clauses, as pointed out by Tsubomoto, are chosen in the specific genre of drama scenario scripts due to their special “cognitive” effect of describing a dynamic (clausal) event under the guise of a static entity (NP).

## 4.2 Complement clause with a verbal head

As surveyed in Section 2, Japanese has a set of complement clauses with a verbal head, i.e. quotative complement clauses marked by *to* or its spoken counterpart *tte*, which do not involve nominalization, and complement clauses coded by nominalizers *no*, *tokoro*, or *koto*.

The quotative complements marked by *tte* are observed to take on some modality-related function of indexing the speaker's epistemic stance toward the proposition expressed (cf. Evans' "modal insubordination" in (34b)), as shown in (39):

- (39) *nan-kai*            *ka*,  
       several-times    or  
       *kaketeru*        *aidani*,  
       call             while  
 → *zettai*            *tyansu ga aru tte*.  
    definitely        chance NOM exist QUOT  
    'We will definitely have a chance to talk (to him) if we call several times.'  
    (Conv: Surprise)  
    (Suzuki 2008: 235)

According to Suzuki (2008), "there is no related predicate, such as *iu* 'say' or *omou* 'think', following (or preceding) the *tte* construction. Instead, the preceding clause should be regarded as an independent sentence." (Suzuki 2008: 235). The *tte* clause in (39), which "ends with *aru* emphatically pronounced with a higher pitch than the preceding word, followed by *tte* with a falling tone" (Suzuki 2008: 235), arguably serves to index the speaker's commitment and reassurance toward the proposition that we will have a chance to talk to him.

The nominalized complements with a verbal head, particularly those marked by nominalizers *koto* and *no*, can carry out the function of what Evans (2007) calls "interpersonal control" (34a) as mild imperative or request forms in sentence-final position, as shown in (40). The *koto* nominalized clause (40a) sounds more high-handed than the *no*-nominalized clause (40b), which sounds milder and more intimate.

- (40) *Eigo o benkyoo suru*            {(a) *koto*/(b) *no*}!  
       English ACC study        do:NONPST NMLZ/NMLZ  
       'You're supposed to study English, {(a) I'm telling you/(b) you know.}'

Korean sentence-final *kes*-nominalized complement clause (41) serves an "interpersonal control" function similar to the *koto*-nominalized clause (40a) in Japanese:

- (41) *Yenge-lul kongpwu ha-l kes.*  
 English-ACC study do-ATTR:FUT NMLZ  
 ‘You’re supposed to study English (I’m telling you).’

In addition to the “interpersonal control” function (34b), the *no*-nominalized complement clause can also serve to “signal presupposed material” (cf. 34c) in sentence-final position (42). Specifically, *no*-clauses index the presence of some contextually presupposed evidence.

- (42) *R: Kore ni nokkate kiroi no ga*  
 this on ride:CONJ yellow one NOM  
*ton-da n zya-nai no.*  
 jump-PST NMLZ COP-NEG NMLZ  
 ‘There is evidence which compels me to believe that the yellow one (must have) jumped (over to the other end of the cliff) by riding on this one.’  
 (Mr. O Corpus, Task 4)  
 (Horie 2014b: 40)

The sentence-final *no*-nominalized complement is a variant of the *noda* construction consisting of *no* and the plain speech level copula *da*. The *noda* construction, which is subject to contextually variable interpretations, has been the intense focus of numerous syntactic, semantic, and pragmatic studies in Japanese linguistics (see Horie 2012).

### 4.3 Adverbial clauses and conjoined clauses

Adverbial and conjoined clauses, when they occur as independent clauses, carry out a variety of pragmatic-discursive functions. They have been studied rather extensively under the rubric of “*iisashi*” (Shirakawa 2009) in Japanese linguistics. The adverbial and conjoined clause markers which develop insubordinating functions are respectively presented in (43) and (44) (which are subsets of (13) and (14), respectively):

- (43) *kara* (‘because’), *ba* (‘if’), *tara* (‘if’), etc.  
 (44) *kedo* (‘and, but’), *ga* (‘and, but’), *te* (‘after’, ‘and then’, etc.), *si* (‘and’), etc.

The insubordinate clauses marked by these markers are more “inference-intensive” (Ohori 2002) than those discussed in subsections 4.1 and 4.2 in that they appear to lack their host main clauses superficially and hence are stranded, as illustrated in (45):

- (45) *Ayako:* *Hurenti toosuto-ni miruku tii.*  
 French toast-and milk tea  
 ‘French toast and milk tea’

*Minoru:* *Sonna mon kue-kka yo.*  
 such thing can.eat-how.dare SFP  
 ‘How dare (you can force) me to eat such a thing.’

*Ayako:* *Eiyoo aru kara.*  
 nutrition exist because  
 ‘Because they are nutritious.’

(*Fuzoroi no ringo tati II*, quoted in Hui 2010: 79; translation by KH)

The *kara*-clause in (45), which constitutes a reason for further action that is not mentioned, invites the inference that Minoru (the addressee) is encouraged to eat French toast and drink milk tea.

Some of these invited inferences are conventionalized. The conjoined *te* clause in (46) and the conditional *ba* and *tara* clauses in (47) are respectively interpreted as conventionalized expressions of command/request (cf. (40a)) and proposal (cf. (32)):

- (46) *Hayaku it-te.*  
 quickly go-GER  
 ‘Leave now.’

- (47) *Hayaku {(a) ike-ba / (b) it-tara}.*  
 quickly go-if go-if  
 ‘Why don’t you leave now?’

When the inference accompanying an insubordinate clause is not completely conventionalized and/or not shared by the majority of speakers, it is perceived as ‘novel’ or even ‘substandard’, as in the pragmatic nuance of indignation conveyed by the conjoined *si*-clause in (48):

- (48) *Me ga kawaku-si.*  
 eye NOM become dry-and  
 ‘My eyes become (easily) dry, and (I can’t stand it).’  
 (Ad of contact lenses, Tokyo Metropolitan Subway Tozai Line)

## 5 Conclusion

This chapter focused on prominent features of subordination phenomena in Japanese, i.e. a typology of subordinate (and conjoined) clauses and their class-internal form-functional contiguity, the interrelationship between subordinate (and conjoined)



clauses, and a form-functional typology of “insubordinate” clauses from a linguistic typology viewpoint. A cross-linguistic comparison between subordination clauses in Japanese and other languages reveals that subordination is a multi-faced complex syntactic, semantic, and pragmatic phenomena. Japanese presents a cross-linguistically rather unique case of structurally and functionally diverse subordinate clauses which have fluid boundaries with main clauses both clause internally and clause externally. Although in many languages (i.e. English) subordination has been typically classified into discrete types, Japanese shows us that this need not be a defining (or necessary) feature of subordination.

It was found that Japanese, an SOV language, makes extensive use of three types of subordinate clauses not only in sentence-internal position where they are expected, but also in sentence-final position where the predicate (typically a verb) occurs. The fact that Japanese has a verb-final word order facilitates the ‘predicate’ use of subordinate clauses in sentence-final verb position. Another no less important motivating factor, which closely interacts with the verb-final word order, is the availability of flexible pragmatic inference in Japanese. In sentence-internal position, subordinate clauses with a nominal head, which can correspond to but are not limited to “relative clauses” and “complement clauses”, manifest various phenomena which are indicative of their structural indeterminacy and interpretive flexibility. The “versatility” (Noonan 1997) of these nominal subordinate clauses is arguably motivated by the availability of flexible pragmatic inference, which is cross-linguistically noteworthy. In sentence-final position, not only “nominal” subordinate clauses but also non-nominal subordinate and conjoined clauses are recruited to perform a variety of pragmatic, rhetorical and stylistic functions. Subordinate clauses thus constitute a very rich communicative resource in Japanese.

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